



# **Otay Valley Quarry Reclamation Plan Amendment**

Draft Environmental Impact Report

EIR-11-01

SCH No. 2010101092

March 2011



# DRAFT ENVIRONMENTAL IMPACT REPORT

*for the*

## *Otay Valley Quarry Reclamation Plan Amendment*

City of Chula Vista

EIR-11-01

SCH No. 2010101092

*Lead Agency:*

City of Chula Vista  
Development Services  
276 Fourth Avenue  
Chula Vista, California 91910

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# LIST OF ACRONYMS AND ABBREVIATIONS

AAQS	Ambient Air Quality Standards
AB	Assembly Bill
AHP	Affordable Housing Program
AIA	Airport Influence Area
ALUCP	Airport Land Use Compatibility Plan
AMSL	Above Mean Sea Level
APCD(s)	Air Pollution Control District(s)
AQMD(s)	Air Quality Management District(s)
AST(s)	Above-Ground Storage Tank(s)
ASTM	American Society for Testing and Materials
bgs	Below ground surface
BMP(s)	Best Management Practice(s)
°C	Degrees Celsius
CA	California
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAC	California Administrative Code
CalEPA	California Environmental Protection Agency
CalOSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFG	California Department of Fish and Game
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CH <sub>4</sub>	Methane
CHMIRS	California Hazardous Materials Incident Report System
CIMIS	California Irrigation Management System
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> E	Carbon Dioxide Equivalent
COHWMP	County Hazardous Waste Management Plan

## LIST OF ACRONYMS AND ABBREVIATIONS

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CPUC	California Public Utilities Commission
CVESD	Chula Vista Elementary School District
CVFD	Chula Vista Fire Department
CVPD	Chula Vista Police Department
CWA	Clean Water Act or Federal Water Pollution Control Act
CWA	County Water Authority
dB	Decibels
dB(A)	A-Weighted Sound Level
DEH	San Diego County Department of Environmental Health
DHS	Department of Health Services
DMG	California Division of Mines and Geology
DSOD	California Department of Water Resources Division of Safety of Dams
DTAC	Departmental Transportation Advisory Committee
DTSC	California Department of Toxic Substance Control
EDR	Environmental Data Resources
EEC	European Economic Community
EIR	Environmental Impact Report
EM	Environmental Monitor
EMI	Emissions Inventory Data
EPA	Environmental Protection Agency
ERNS	Emergency Response Notification System
ES	Environmental Specialist
ET <sub>0</sub>	Evapotranspiration
°F	Degrees Fahrenheit
FedOSHA	Federal Occupational Safety and Health Administration
GDP	General Development Plan
GHG	Greenhouse Gas
GMOC	Growth Management Oversight Committee
GWP	Global warming potential
HFC	Hydrofluorocarbons
HMMD	San Diego County Department of Environmental Health Hazardous Materials Management Division
HSWA	Hazardous and Solid Waste Act
HWCL	California Hazardous Waste Control Law
I-	Interstate, as in I-805
IA	Implementing Agreement
ICLEI	International Council of Local Environmental Initiatives
IPCC	Intergovernmental Panel on Climate Change

## LIST OF ACRONYMS AND ABBREVIATIONS

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LCFS	Low Carbon Fuel Standard
LDN	Day-Night Level
L <sub>eq</sub> /LEQ	Equivalent Continuous Noise Level
μg/m <sup>3</sup>	Micrograms per cubic meter of air
MLD	Most Likely Descendant
MM	Mitigation Monitor
MMR	Mitigation Monitoring Report
MMRP	Mitigation Monitoring and Reporting Program
MRZ(s)	Mineral Resource Zone(s)
MSCP	Multiple Species Conservation Program
MWD	Metropolitan Water District
N <sub>2</sub> O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
N/A	Not applicable
NCP	National Contingency Plan
NF <sub>3</sub>	Nitrogen trifluoride
NO <sub>2</sub>	Nitrogen Dioxide
NOC	Notice of Completion
NOP	Notice of Preparation
NOT	Notice of Termination
NO <sub>x</sub>	Nitrogen Oxides
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
O <sub>3</sub>	Ozone
OHM	United States Department of Transportation Office of Hazardous Materials Safety
OPR	Governor's Office of Planning and Research
ORVP	Otay Valley Regional Park
OVQ	Otay Valley Quarry
Pb	Lead
P-C	Planned Community (City of Chula Vista Municipal Code)
PCC	Portland cement concrete
PFC	Perfluorocarbons
PM <sub>10</sub>	Particulate Matter of 10 microns in diameter or smaller
PM <sub>2.5</sub>	Particulate Matter less than 2.5 microns in diameter
ppm	Parts per Million
PRC	Public Resources Code

## LIST OF ACRONYMS AND ABBREVIATIONS

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RCC	Resource Conservation Commission
RCRA	Resource Conservation and Recovery Act
RFS	Renewable Fuel Standard
RMP	Resource Management Plan
ROC(s)	Reactive Organic Compound(s)
ROG	Reactive Organic Gas
RPW	Relatively permanent waters
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCH	State Clearinghouse
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDG&E	San Diego Gas and Electric
SDWA	Safe Drinking Water Act
SF <sub>6</sub>	Sulfur hexafluoride
SMARA	State Surface Mining and Reclamation Act
SO <sub>2</sub>	Sulfur Dioxide
SO <sub>x</sub>	Sulfur Monoxide
SMGB	State Mining and Geology Boars
Sp./sp.	Species
SPA(s)	Sectional Planning Area(s)
SR	State Route, as in SR-52
SRP	Subregional Plan
SSC	California Species of Special Concern
SUHSD	Sweetwater Union High School District
SUSMP	Standard Urban Storm Mitigation Plan
SWRCB	State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
TAC(s)	Toxic Air Contaminant(s)
TNW	Traditionally navigable waters
UNFCCC	United Nations Framework Convention on Climate Change
U.S./US	United States
USACOE	United States Army Corps of Engineers
USGS	United States Geological Survey
USFWS	United States Fish and Wildlife Service
UST(s)	Underground storage tank(s)
VOC(s)	Volatile organic compound(s)

## LIST OF ACRONYMS AND ABBREVIATIONS

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WDR	Waste discharge requirements
WOUS	Waters of the United States
WQTR	Water Quality Technical Report



## EXECUTIVE SUMMARY

This Environmental Impact Report (EIR) is an informational document intended for use by the City of Chula Vista, other public agencies, and members of the general public in evaluating the potential environmental effects of the Otay Valley Quarry Reclamation Plan Amendment project, located in the City of Chula Vista approximately two miles east of Interstate 805 (I-805) at Heritage Road and Wiley Road. This EIR has been prepared in accordance with criteria, standards, and procedures of the California Environmental Quality Act (CEQA) of 1970 as amended [Public Resources Code (PRC) Section 21000 et seq.], State CEQA Guidelines [California Administrative Code (CAC) Section 15000 et seq.], and the City of Chula Vista's EIR requirements. Per Section 21067 of CEQA and Sections 15367 and 15050 through 15053 of the State CEQA Guidelines, the City of Chula Vista is the Lead Agency under whose authority this document has been prepared.

### **Environmental Review Process**

Based on an initial review of the proposed project, the City of Chula Vista determined that an EIR would be required for the proposed Otay Valley Quarry Reclamation Plan Amendment project. Environmental issue areas to be evaluated in the EIR were identified and are presented in Section 1.0, *Introduction*, of this EIR.

In accordance with Section 15103 of the CEQA Guidelines, the City of Chula Vista circulated a Notice of Preparation (NOP) of a Draft EIR on October 25, 2010 (Appendix A), to inform property owners within 500 feet, public agencies, and members of the public who may have an interest in the project that the City intends to prepare an EIR for the proposed project. The purpose of the NOP was to solicit guidance from various agencies and the public regarding the scope and content of the environmental information to be included in the EIR. Agencies and individuals receiving copies of the NOP had 30 days to respond. Concerns raised in the responses to the NOP are presented in letters included in Appendix A to this EIR. A scoping meeting was held on November 8, 2010, to discuss the project and the environmental review process and to solicit comments on the environmental analysis to be included in the EIR. Issues raised in comment letters received during review of the NOP, as well as comments provided at the scoping meeting, which pertain to the environmental effects of the project have been addressed in this EIR.

The Draft EIR is subject to a public review period of 45 days, during which time comments on the environmental analysis are accepted from interested agencies, groups, and individuals. Responses to these comments will be prepared and incorporated into the Final EIR, prior to the certification of the EIR and the Chula Vista City Council's decision on the proposed project.

### **Project Location and Setting**

The draft Otay Valley Quarry Reclamation Plan Amendment has been prepared for final reclamation of the Otay Valley Quarry. Otay Valley Quarry is located within the City of Chula Vista in the southwestern portion of San Diego County, California. The mine operations and processing areas occupy approximately 197 acres of an approximately 278-acre site on portions of Assessor's Parcel Numbers 644-060-06, 16, and 18. The Project Site lies two miles east of I-805, proximate to industrial and commercial developed lands in the City of Chula Vista. A private driveway from Auto Park Drive at Heritage Road provides access to the operation. Current City of Chula Vista zoning of the property is "P-C Planned Community". The P-C zone provides for a variety of urban uses, including commercial, industrial, residential, recreational, and open space as approved through the Chula Vista General Plan. Surrounding land uses include open

space/Preserve areas to the immediate east, south, and west. Land uses within the general vicinity of the Project Site include future Otay Ranch Village Four and the Otay Landfill to the northwest, and Crickett Wireless Amphitheater and developed residential uses to the southwest. The regional and local setting of the Project Site are discussed in Section 2.0, *Environmental Setting*, of this EIR.

### **Project Description**

The State Surface Mining and Reclamation Act (SMARA) requires a description of the “proposed use or potential uses” of a mined site after reclamation. Following the completion of mining activities, reclamation of the Otay Valley Quarry would prepare the surfaces to a condition suitable for subsequent development and/or open space in accordance with the P-C zone and the Chula Vista General Plan. Surfaces would be stabilized for erosion control. Cut surfaces would be completed to slope grades to ensure long-term stability. Sediment basins and fines storage areas would be dewatered and revegetated with plant species suitable for erosion control. Grading would be completed in such a manner as to ensure proper surface drainage. Recoverable topsoil would be stockpiled for use on benches and quarry floor areas to be revegetated. The soil would be placed to enhance revegetation as surfaces are completed. The success of revegetation would be monitored after completion of final reclamation to ensure successful erosion control. The quarry pit area would hold local groundwater, creating a water body with approximately 80 acres of surface area.

For the proposed Otay Valley Quarry Reclamation Plan Amendment project, approval of the Reclamation Plan Amendment by the City of Chula Vista City Council is required. Additionally, review of the Reclamation Plan Amendment by the State Office of Mine Reclamation (OMR) is required prior to approval by the City. Implementation of the proposed Reclamation Plan Amendment would not affect jurisdictional waters or endangered species. Therefore, other State or Federal permits would not be required. (See Section 4.6, *Biological Resources*, for a discussion of biological resources on and surrounding the Project Site and the project’s potential to impact sensitive resources and habitat.)

Section 3.0, *Project Description*, of the EIR provides a detailed discussion of the proposed project.

### **Summary of Environmental Impacts and Mitigation**

Section 4.0, *Environmental Impact Analysis*, of this EIR includes a discussion of potential environmental effects associated with the project. The analysis in Section 4.0 shows that the proposed Otay Valley Quarry Reclamation Plan Amendment project would result in significant impacts to Land Use, Planning, and Zoning (indirect); Noise (indirect); Biological Resources (indirect); Cultural Resources; Paleontological Resources; Hydrology/Drainage/Water Quality; Hazards/Risk of Upset; and Geology and Soils. All other impacts were found to be less than significant. Mitigation measures have been identified which would reduce project impacts to below a level of significance for all significant impacts.

Table ES-1, *Summary of Environmental Impacts and Mitigation Measures*, summarizes the potential environmental impacts based on development of the Otay Valley Quarry Reclamation Plan Amendment project, as analyzed in Section 4.0 of this EIR. The table also provides a summary of the mitigation measures which, when implemented, can avoid or reduce significant impacts to below a level of significance. Responsibilities for monitoring compliance with each mitigation measure are provided in the Mitigation Monitoring and Reporting Program (see Section 10.0, *Mitigation Monitoring and Reporting Program*). The significance of environmental impacts after implementation of the recommended mitigation measures is provided in the last column of Table ES-1.



TABLE ES-1. SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impacts	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<p>LAND USE, PLANNING, AND ZONING</p> <p>The Reclamation Plan Amendment's conformance to local regulation, results in a less than significant impact. The Reclamation Plan Amendment is in accordance with SMARA, as well as regulations within the City of Chula Vista General Plan and Municipal Code. Use of the reclaimed mining site for open space does not preclude future development of the Central District (in particular, Otay Ranch Village Four) to meet its full potential. The proposed project is not in conflict with any applicable habitat preservation plan or natural community conservation plan. The proposed project does not encroach upon the City's Multiple Species Conservation Program (MSCP) area. However, the proposed project has the potential for indirect impacts on the adjacent MSCP Preserve, as presented in Section 4.6, <i>Biological Resources</i>. Mitigation measures are required, which would reduce impacts to below a level of significance.</p> <p>LANDFORM ALTERATION/AESTHETICS</p> <p>The restoration processes associated with the Reclamation Plan Amendment would result in changes to the aesthetics of the area. These changes would be considered an enhancement from the current baseline condition of disturbed land that has resulted from ongoing mining operations. The cut of quarry slopes would create variation and visual interest. Native vegetation would be used to reflect a similar visual quality as surrounding land uses and would enhance visual harmony with the natural landscape. Visual impacts would be minimized to the extent possible, given the intrusive visual quality of mining sites.</p> <p>The Project Site is not located in the vicinity of any scenic highways designated by Caltrans. The project is located within the viewshed of General Plan-designated scenic roadways. Views from applicable roadways would be enhanced by the proposed Reclamation Plan Amendment, as current untreated steep slopes would be replaced by varying slopes</p>	<p>Significant (indirect impacts to MSCP Preserve).</p>	<p>BIO-1 through BIO-3, present below in <i>Biological Resources</i>.</p>	<p>Less than significant.</p>
<p>The restoration processes associated with the Reclamation Plan Amendment would result in changes to the aesthetics of the area. These changes would be considered an enhancement from the current baseline condition of disturbed land that has resulted from ongoing mining operations. The cut of quarry slopes would create variation and visual interest. Native vegetation would be used to reflect a similar visual quality as surrounding land uses and would enhance visual harmony with the natural landscape. Visual impacts would be minimized to the extent possible, given the intrusive visual quality of mining sites.</p> <p>The Project Site is not located in the vicinity of any scenic highways designated by Caltrans. The project is located within the viewshed of General Plan-designated scenic roadways. Views from applicable roadways would be enhanced by the proposed Reclamation Plan Amendment, as current untreated steep slopes would be replaced by varying slopes</p>	<p>Less than significant.</p>	<p>None required.</p>	<p>N/A</p>

Environmental Impacts	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<p>planted with vegetation that is consistent and compatible with what is existing in surrounding open spaces naturally. Therefore, impacts to views from a state scenic highway would be less than significant.</p> <p>Proposed reclamation activities would not include the construction of buildings, structures, or other urban uses that would require lighting or create a new source of glare. Reclamation would restore the currently disturbed land area and mining operation site to revegetated open space using native plants and grasses. As no land development is proposed, no impacts related to light or glare would occur.</p>			
TRAFFIC, CIRCULATION, AND ACCESS			
<p>Traffic patterns and volumes generated from proposed reclamation activities would be less than existing conditions associated with current mining operations, and each phase of reclamation would be short-term in nature. Impacts to Traffic, Circulation, and Access as a result of the proposed project would be less than significant.</p>	Less than significant.	None required.	N/A
NOISE			
<p>Construction traffic generated from reclamation activities and operations would consist predominantly of employee trips to and from the gated site entrance, ingress and egress of heavy machinery and equipment traffic, as well as material delivery to the Project Site. Traffic volumes generated from proposed reclamation activities would be less than existing conditions associated with current mining operations, and each phase of reclamation would be short-term in duration. Therefore, noise impacts associated with the construction of revegetation activities, no new sources of noise would occur, other than seasonal maintenance and monitoring, which would have a negligible contribution to ambient noise levels. However, the proposed project has the potential for indirect impacts on the adjacent MSCP Preserve, as presented in Section 4.6, <i>Biological Resources</i>. Mitigation measures are required, which would reduce</p>	Significant (Indirect impacts to MSCP Preserve).	BIO-1 through BIO-3, present below in <i>Biological Resources</i> .	Less than significant.

Environmental Impacts	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
impacts to below a level of significance.			
<b>AIR QUALITY</b> Emissions generated from the project would be substantially less than those generated by the existing mining operations and not cause any significant air quality impacts. Emissions due to construction would be short-term and would not violate any air quality regulations or standards. Air quality impacts due to operations of the project following implementation of the proposed Reclamation Plan Amendment would not occur. The project would not create cumulatively significant air quality impacts, would not affect sensitive receptors, and would not create objectionable odors. No mitigation measures are required.	Not significant.	None required.	N/A
<b>BIOLOGICAL RESOURCES</b> The proposed project has the potential to result in indirect impacts to the adjacent MSCP Preserve.	Significant (indirect impacts to MSCP Preserve).	<p><b>Special-Status Vegetation Communities</b> Design features listed in the Otay Valley Quarry Reclamation Plan Amendment would mitigate for potential indirect impacts to special-status vegetation communities occurring in adjacent habitat areas. With incorporation of design features EC-1, EC-2, GW-1, SP-1, and R-3, potential indirect impacts related to dust, erosion, pollutants, runoff, hydrological changes, and invasion of exotics would be less than significant.</p> <p>In addition, potential indirect impacts to special-status plants due to trampling by humans would be avoided by maintaining secure access to and from the reclaimed quarry. Under the proposed Reclamation Plan Amendment, the property would be fenced and gated and all visitors would be required to check in at the administration office, have proper safety gear, and be accompanied to any restricted areas.</p> <p><b>Special-Status Plant and Wildlife Species</b> With incorporation of project design features EC-1, EC-2, and GW-1, potential indirect impacts related to dust, erosion, and pollutants would be less than significant. With incorporation of design feature SP-1, potential indirect impacts related to runoff and hydrological changes would be less than significant. With incorporation of design feature R-3, potential indirect impacts related to invasion of exotics would be less than significant.</p> <p>In addition, potential indirect impacts to special-status plants due to trampling</p>	Less than significant.

Environmental Impacts	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>by humans would be avoided by maintaining secure access to and from the reclaimed quarry. Under the proposed reclamation plan amendment, the property would be fenced and gated and all visitors would be required to check in at the administration office, have proper safety gear, and be accompanied to any restricted areas.</p> <p>Implementation of the following measure, based on guidelines established in Section 7.5.2 of the Chula Vista MSCP Subarea Plan (City of Chula Vista 2003) would mitigate for potential indirect impacts to nesting birds associated with noise during equipment removal and rough grading. With incorporation of mitigation measure BIO-1, potential indirect impacts related to noise would be less than significant.</p> <p>BIO-1— Appropriate noise attenuation features will be constructed adjacent to the quarry to minimize noise impacts. Excessively noisy uses or activities adjacent to breeding areas, including temporary grading activities, must incorporate noise reduction measures or be curtailed during the breeding season of sensitive bird species. Construction activity adjacent to the Preserve shall maintain noise levels that do not exceed 60 dB(A) Leq, or ambient noise levels if higher than 60 dB(A) Leq, during the breeding season for nesting sensitive birds. Prior to commencement of reclamation activities, a pre-construction survey shall be conducted to document the location of active nest sites. If active sites are observed, an acoustical analysis shall be provided to the City that demonstrates that adequate noise attenuation features shall be constructed to maintain noise levels below 60 dB(A) Leq at any active nest location. Outside the bird breeding season(s), no restrictions shall be placed on temporary construction noise.</p> <p><b>Regional Resource Planning</b></p> <p>Preserve areas under the City of Chula Vista MSCP lie adjacent to the existing quarry and are expected to be adjacent to the quarry at the start of reclamation activities in 2089. In order to reduce indirect impacts to the Preserve, the project would be required to adhere to specific guidelines established in Section 7.5.2 of the Chula Vista MSCP Subarea Plan (City of Chula Vista 2003). These guidelines are reproduced here, and would be incorporated into the proposed project as mitigation measures BIO-2 through BIO-3. Guidelines relating to noise are addressed in mitigation measures BIO-1, above.</p> <p>BIO-2 – Drainage</p> <p>1. All reclamation activities and reclaimed areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials, and</p>	

Environmental Impacts	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>other elements that might degrade or harm the natural environment or ecosystem processes within the Preserve. This will be accomplished using a variety of methods including natural detention basins, grass swales, or mechanical trapping devices. These systems shall be maintained approximately once a year, or as often as needed, to ensure proper functioning. Maintenance should include dredging out sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.</p> <p>2. The project shall implement urban runoff and drainage plans as specified in Section 5.2.4 of the Otay Valley Reclamation Plan Amendment (December 23, 2010) which will create the least impact practicable for all areas adjacent to the Preserve.</p> <p>3. Pursuant to the San Diego Regional Water Quality Control Board Municipal Permit, and the City of Chula Vista Storm Water Management Standards Requirements Manual, which includes the SUSMP, all reclamation areas located directly adjacent to or discharging directly to an environmentally sensitive area (as defined in the Municipal Permit and the Local SUSMP) are required to implement site design, source control, and treatment control BMPs. For the proposed project and as presented in the Otay Valley Quarry Reclamation Plan Amendment (December 23, 2011) the BMPs shall, at a minimum, include:</p> <ul style="list-style-type: none"> <li>▪ Sedimentation basins;</li> <li>▪ Water truck usage and soil compaction via track walking;</li> <li>▪ Diversion of run-on and run-off through the use of temporary chevrons;</li> <li>▪ Silt fences, wattles, rock slope protection, or other sediment control devices;</li> <li>▪ Cleaning of accumulated sediment, debris, and potential contaminants from the storm water structural controls is conducted as needed before the start of the rainy seasons. This cleaning is done on an as-needed basis during the rainy season; and</li> <li>▪ Clearing of debris from drain inlets and drainage pipes.</li> </ul> <p>4. Written confirmation that this mitigation measure has been satisfied shall be provided to the City prior to commencement of reclamation activities. Confirmation shall be provided to the satisfaction of the City Engineer in the form of an approved National Pollutant Discharge Elimination System Permit (NPDES) and Storm Water Pollution Prevention Plan (SWPPP).</p> <p>BIO-3 - Invasives</p>	

Environmental Impacts	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>The project shall comply with Section 5.2.3 of the Otay Valley Quarry Reclamation Plan. The project plant material described in the Reclamation Plan ensures that no invasive non-native plant species will be introduced into areas immediately adjacent to the Preserve. Consistent with the Reclamation Plan, all open space slopes immediately adjacent to the Preserve will be planted with native species that reflect the adjacent native habitat.</p> <p>Written confirmation that this mitigation measure has been satisfied shall be provided to the City prior to commencement of reclamation activities. Confirmation shall be provided to the satisfaction of the Development Services Director (or designee) in the form of landscape and irrigation plans prepared consistent with the list of approved plant species contained in the Otay Valley Quarry Reclamation Plan Amendment.</p> <p>Relative to biological buffers, implementation of project design features EC-1, EC-2, GW-1, SP-1, and R-3, as required by the Reclamation Plan Amendment and presented in Section 4.6.3 would avoid significant indirect impacts.</p> <p>Design features EC-1, EC-2, GW-1, SP-1, and R-1, incorporated in the Reclamation Plan Amendment, shall be complied with as set forth therein.</p>	
<b>CULTURAL RESOURCES</b>			
The proposed Reclamation Plan Amendment would reclaim and revegetate the site of an on-going quarry operation. Although a low probability, the discovery of human remains would be considered a potentially significant impact. Implementation of mitigation measure CR-1 would reduce impacts to a less than significant level.	Significant.	<p>CR-1 Prior to implementation of the reclamation plan, the project applicant shall contract with a San Diego County-certified archaeologist to implement a grading-monitoring program to the satisfaction of the City of Chula Vista. Verification of the contract shall be presented in a letter from the Project Archaeologist to the City of Chula Vista. The program shall include, but not be limited to, the following:</p> <ol style="list-style-type: none"> <li>1. The consulting archaeologist shall contract with a Native American Observer to be involved with the grading-monitoring program.</li> <li>2. During the original cutting of previously undisturbed deposits, the archaeological monitor(s) (and Native American Observer) shall be on site, depending on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. Monitoring and the need for monitoring will be at the discretion of the qualified principal archaeologist. Monitoring locations may also include designated archeological high-probability areas. Intermittent monitoring may occur in areas of moderate archeological sensitivity at the discretion of the qualified/principal archaeologist. Multiple monitors may be required, due to the amount of grading being completed at any</li> </ol>	Less than significant.

Environmental Impacts	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>time, at the discretion of the principal archaeologist.</p> <p>3. In the event that previously unidentified potentially significant cultural resources are discovered, the archaeologist shall have the authority to divert or temporarily halt ground-disturbance operations in the area of discovery to allow evaluation of potentially significant cultural resources. The San Diego County-certified Archaeologist must concur with the evaluation before construction activities will be allowed to resume in the affected area. For significant cultural resources, a Research Design and Data Recovery Program to mitigate impacts shall be prepared by the consulting archaeologist and approved by the San Diego County-certified Archaeologist, then carried out using professional archaeological methods. If any human remains are discovered, the San Diego County Coroner shall be contacted. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the Native American Heritage Commission, shall be contacted in order to determine proper treatment and disposition of the remains.</p> <p>4. Before construction activities are allowed to resume in the affected area, the artifacts shall be recovered and features recorded using professional archaeological methods. The archaeological monitor(s) and Native American Observer shall determine the amount of material to be recovered for an adequate artifact sample for analysis.</p> <p>5. In the event that previously unidentified cultural resources are discovered, all cultural material collected during the grading-monitoring program shall be processed and curated according to current professional repository standards. The collections and associated records shall be transferred, including title, to an appropriate federally-recognized curation facility within San Diego County, to be accompanied by payment of the fees necessary for permanent curation.</p> <p>6. In the event that previously unidentified cultural resources are discovered, a report documenting the field and analysis results and interpreting the artifact and research data within the research context shall be completed and submitted to the satisfaction of the City of Chula Vista prior to the completion of the fourth stage</p>	

Environmental Impacts	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>of reclamation.</p> <p>7. In the event that no cultural resources are discovered, a brief letter to that effect shall be sent to the City of Chula Vista by the consulting archaeologist, confirming that the grading-monitoring activities have been completed.</p>	
<p><b>PALEONTOLOGICAL RESOURCES</b></p> <p>Proposed site grading and other reclamation activities have the potential to impact unknown paleontological resources that could exist on the Project Site. Due to the potential to encounter these resources during reclamation activities, mitigation measure PALEO-1 would be required. Mitigation measure PALEO-1 would reduce impacts to paleontological resources to a less than significant level.</p>	Significant.	<p>PALEO-1 1. The project will require implementation of a pre-construction mitigation program and/or construction mitigation program approved by the City. All mitigation programs shall be performed by a qualified professional paleontologist, defined here as an individual with a M.S. or Ph.D. in paleontology or geology who has proven experience in San Diego County paleontology and who is knowledgeable in professional paleontological procedures and techniques. Fieldwork may be conducted by a qualified paleontological monitor, defined here as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor shall always work under the direction of a qualified paleontologist.</p> <p>2. Pre-construction mitigation shall be implemented if the qualified professional paleontologist determines that there is a potential for well-preserved and significant fossil remains, discovered in the assessment phase, would be destroyed during initial brush clearing and equipment move-on. The individual tasks of this program include:</p> <ol style="list-style-type: none"> <li>Surface prospecting for exposed fossil remains, generally involving inspection of existing bedrock outcrops but possibly also excavation of test trenches;</li> <li>Surface collection of discovered fossil remains, typically involving simple excavation of the exposed specimen but possibly also plaster jacketing of large and/or fragile specimens or more elaborate quarry excavations of richly fossiliferous deposits;</li> <li>Recovery of stratigraphic and geologic data to provide a context for the recovered fossil remains, typically including description of lithologies of fossil-bearing strata, measurement and description of the overall stratigraphic section, and photographic documentation</li> </ol>	Less than significant.



Environmental Impacts	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>d. of the geologic setting; Laboratory preparation (cleaning and repair) of collected fossil remains, generally involving removal of enclosing rock material, stabilization of fragile specimens (using glues and other hardeners), and repair of broken specimens;</p> <p>e. Cataloging and identification of prepared fossil remains, typically involving scientific identification of specimens, inventory of specimens, assignment of catalog numbers, and entry of data into an inventory database;</p> <p>f. Transferal, for storage, of cataloged fossil remains to an accredited institution (museum or university) that maintains paleontological collections (including the fossil specimens, copies of all field notes, maps, stratigraphic sections, and photographs); and</p> <p>g. Preparation of a final report summarizing the field and laboratory methods used, the stratigraphic units inspected, the types of fossils recovered, and the significance of the curated collection.</p> <p>3. Construction mitigation shall be implemented as part of reclamation activities, at the discretion of the qualified professional paleontologist and in accordance with the approved mitigation program. The scope and pace of reclamation will generally dictate the scope and pace of mitigation. The individual tasks of a construction mitigation program typically include:</p> <p>a. Monitoring of any grading to discover unearthed fossil remains, generally involving inspection of ongoing exposures;</p> <p>b. Salvage of unearthed fossil remains, typically involving simple excavation of the exposed specimen but possibly also plaster jacketing of large and/or fragile specimens, or more elaborate quarry excavations of richly fossiliferous deposits;</p> <p>c. Recovery of stratigraphic and geologic data to provide a context for the recovered fossil remains, typically including description of lithologies of fossil-bearing strata, measurement and description of the overall stratigraphic section, and photographic documentation of the geologic setting;</p> <p>d. Laboratory preparation (cleaning and repair) of</p>	

Environmental Impacts	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<p><b>AGRICULTURAL RESOURCES</b></p> <p>The Project Site is not located within an area designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The site is classified as Other Land, Grazing Land, and Farmland of Local Importance; however, no agricultural uses exist on the Project Site. Therefore, no impact to existing farmlands would occur as a result of the proposed project. Additionally, the proposed Project Site is not zoned for agricultural use and is not subject to a Williamson Act contract. There are no forested lands or timberlands that could be affected by the proposed project. The reclamation of the Otay Valley Quarry would not involve any changes in the existing environment that could result in the conversion of farmland to non-agricultural use or forested lands to non-forest use. No impacts would occur.</p> <p><b>HYDROLOGY/DRAINAGE/WATER QUALITY</b></p> <p>The potential for accidental spills of toxic substances, such as gasoline, diesel fuel, lubricating oil, grease, and solvents, during reclamation would be regarded as a significant impact to water quality.</p>		<p>collected fossil remains, generally involving removal of enclosing rock material, stabilization of fragile specimens (using glues and other hardeners), and repair of broken specimens;</p> <p>e. Cataloging and identification of prepared fossil remains, typically involving scientific identification of specimens, inventory of specimens, assignment of catalog numbers, and entry of data into an inventory database;</p> <p>f. Transferal, for storage, of cataloged fossil remains to an accredited institution (museum or university) that maintains paleontological collections, including the fossil specimens, copies of all field notes, maps, stratigraphic sections and photographs; and</p> <p>g. Preparation of a final report summarizing the field and laboratory methods used, the stratigraphic units inspected, the types of fossils recovered, and the significance of the curated collection.</p>	
	Not significant.	None required.	N/A
	Significant.	<p>HYDRO-1 BMPs shall be incorporated into the final plan for reclamation to be reviewed and approved by the City of Chula Vista and shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> <li>All construction vehicles shall be adequately maintained and equipped to minimize/eliminate fuel spillage. All equipment maintenance work shall occur on-site or within the designated</li> </ul>	Less than significant.

Environmental Impacts	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>construction staging area.</p> <ul style="list-style-type: none"> <li>Any reclamation materials that need to be temporarily stockpiled or equipment/supplies that need to be stored on-site shall be kept within the construction staging areas and shall be covered when not in use.</li> </ul> <p>Design Features EC-1 and EC-2, incorporated in the Reclamation Plan Amendment, shall be complied with as set forth therein.</p> <p>In addition to the BMPs listed above, mitigation measures HAZ-1 through HAZ-5 (described below in Hazards/Risk of Upset) would reduce impacts resulting from hazardous materials spillage or leaking to a less than significant level.</p>	
<b>GEOLOGY AND SOILS</b>			
The proposed project does not involve the construction of homes or other structures. Instead, the project would provide reclamation of the mined site at the conclusion of mining operations, estimated to be about 2089. Additionally, there are no known active faults underlying the site or projecting toward the site. As such, the project would not expose people or structures to potential substantial adverse effects involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, or landslides. Erosion control facilities would be constructed, as required. Additionally, the project incorporates specific design features that would avoid potential erosion impacts. However, there is potential that shallow failures in weathered rock could occur, resulting in potential risk. Implementation of mitigation measure GEO-1 would reduce potential impacts to geology and soils to a less than significant level	Significant.	<p>GEO-1 Ensure that the uppermost 50 feet of slopes will be cut or filled to a slope angle of 1:1 (horizontal to vertical) to mitigate shallow failures in weathered rock.</p> <p>Design features EC-1 and EC-2, incorporated in the Reclamation Plan Amendment, shall be complied with as set forth therein.</p>	Less than significant.
<b>PUBLIC SERVICES AND UTILITIES</b>			
The proposed project would not result in significant impacts associated with public services and utilities. The proposed Project Site would not require access to new public water supplies, or the construction of new public water treatment or storage facilities. The project does not propose new housing or structures, and no part of the reclamation process would otherwise increase the local population of Chula Vista or the regional population of San Diego County. As such,	Not significant.	None required.	N/A

Environmental Impacts	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<p>there would not be a need for wastewater services to the site, nor would there be a need for any long-term water services, as plants incorporated into the revegetation process would not require additional water following reclamation and satisfaction of success criteria.</p> <p>The proposed project would not place a greater demand on current City fire, police, or emergency medical services. There would be no need for additional personnel, vehicles, related equipment, or expansion of facilities.</p> <p>Since the project does not propose housing and therefore would not result in an increase in student population, impacts to existing schools or the need for additional schools would not result. Reclamation activities would not impact local parks, nor would they necessitate the construction of additional parkland in the County of San Diego or the City of Chula Vista, as the project would not generate the need for new housing development that would otherwise increase the local or regional population.</p> <p>The proposed project would not result in the excessive use of gas, electricity, or other energy sources. Reclamation activities for the proposed Project Site would include backfilling and compaction, recontouring, surface and slope stabilization, erosion control, revegetation, stream protection, grading, drainage and water diversion, topsoil salvage and redistribution, and equipment removal. Equipment to be removed would include a front-end wheel loader, dozers, portable water pumps, and a motor grader. These activities would not generate long-term solid waste that would impact landfill capacities. Revegetation would involve the propagation of native grasses and plants with the use of existing on-site stockpiles comprised of excavated silts, clays, and sands, thus diverting these soil stockpiles from local landfills. Therefore, the project would have no significant impact.</p> <p>HAZARDS/RISK OF UPSET</p>			

Environmental Impacts	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Prior to mitigation, there is the potential for the project to have significant impacts due to hazards and hazardous materials. Accidents and spills involving small quantities of these materials that have potential to occur at localized sites would not create a significant hazard to the public or the environment; however, small quantities of petroleum compounds and metals could be released in the rare event of a spill or leak from equipment use or removal. In the rare event of a spill, absorbent material would be used to prevent chemicals or oils from being diverted off site. In addition, design features GW-1 and GW-2, as well as mitigation measures HAZ-1 through HAZ-4, would reduce impacts resulting from hazardous materials spillage or leaking to a less than significant level. Therefore, impacts would be less than significant with mitigation incorporated.	Significant.	HAZ-1  All equipment refueling and maintenance shall be restricted to designated staging areas located away from drainages to avoid inadvertent releases from heavy equipment vehicles or supplies from entering surface water bodies. Additionally, heavy equipment and vehicles shall be inspected for leaks on a daily basis.	Less than significant.
		HAZ-2  Retention basins shall be installed in appropriate locations on the Project Site to prevent sediment-laden runoff, particularly in areas of exposed soils located within 10 feet of a drainage feature. Other sedimentation control features may include filter berms, straw base barriers, filter inlets, and vegetative swales.	
		HAZ-3  All reclamation staging areas shall include surface runoff reduction measures to contain hazardous materials such as oil, grease, or fuel products from being diverted off site or toward receiving waters. Should heavy equipment be stored overnight, particularly near drainage areas, drip pans shall be installed beneath machinery engine blocks and hydraulic systems.	
		HAZ-4  A Spill Prevention Control and Countermeasure Plan shall be prepared and implemented should unanticipated releases of hazardous materials occur. The plan shall identify all hazardous materials (e.g., fuels, solvents) that would be present on any portion of the construction area and Project Site. Contingency analysis and planning shall be presented to identify potential spill or accident situations, how to minimize their occurrence, and how to respond should they occur. The plan shall also identify spill response materials (e.g., absorbent pads, shovels) to be kept at the construction site and their locations. All construction personnel shall receive training regarding the appropriate work practices necessary to effectively comply with the applicable environmental laws and regulations, including without limitation, hazardous materials spill prevention and response measures.	
		HAZ-5  As the water body fills with water, monitoring and control for vectors shall occur at intervals of every six months, or as described by the local vector control agency. Monitoring activities may cease upon 50 percent fill completion of the water body.	
		Design feature GW-1, incorporated in the Reclamation Plan Amendment, shall be complied with as set forth therein.	
HOUSING AND POPULATION			

# EXECUTIVE SUMMARY

Environmental Impacts	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
The proposed project does not include construction of new homes or businesses and would not extend roads or other infrastructure to accommodate local or regional growth. The project would periodically add jobs to the area associated with reclamation activities; however, the addition of jobs would be temporary and no permanent jobs or residential units would occur as a result of project implementation. Implementation of the proposed project would not result in the displacement of any housing. All physical changes resulting from the proposed project would occur on property that consists of an aggregate quarry and associated equipment and structures. No impact would result.	Not significant.	None required.	N/A
<b>MINERAL RESOURCES</b>			
Mining of resources until depletion would occur prior to implementing the proposed Reclamation Plan Amendment. There would be no loss of availability of a known mineral resource or loss of a locally-important mineral resource associated with the Reclamation Plan Amendment, as resources would be already utilized in the on-going mining process at the quarry. Therefore, the project would not have a potential to result in significant impacts to mineral resources.	Not significant.	None required.	N/A
<b>GREENHOUSE GAS (GHG) EMISSIONS</b>			
GHG emissions would only occur during construction of the project, which is anticipated to take approximately 11 weeks to complete. Following construction, the proposed project would not result in GHG emissions, as there would be no new mobile sources or stationary sources. As a result, the proposed project is not likely to result in a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Impacts would be less than significant. Furthermore, the project would result in a substantial reduction in GHG emissions from baseline conditions associated with the on-going mining operations which would occur until 2089.	Less than significant.	None required.	N/A

**Cumulative Impacts**

As discussed in Section 5.0, *Cumulative Effects*, of this EIR, development of the Otay Valley Quarry Reclamation Plan Amendment project would not lead to significant environmental cumulative impacts when considered together with other projects causing related impacts in the City of Chula Vista, adjacent areas, and the region.

**Growth Inducing Effects**

Growth inducing effects can occur where the proposed project could foster economic or population growth either directly or indirectly in the surrounding environment. The proposed Otay Valley Quarry Reclamation Plan Amendment project would not offer housing or other employment opportunities and would not provide economic opportunities that are not currently available. Thus, the project is not considered to be growth-inducing.

**Significant Irreversible Environmental Changes**

Construction of the Otay Valley Quarry Reclamation Plan Amendment project would result in significant irreversible environmental changes. Reclamation of the Project Site entails the commitment of energy, natural resources, and construction materials. The primary energy source would be fossil fuels, representing an irreversible commitment of this resource. The proposed project does not provide highways or other access improvements to previously inaccessible areas and therefore would not commit future generations to the use of non-renewable resources for such facilities. There is the potential for the project to have environmental accidents. Small quantities of petroleum compounds and metals could be released in the rare event of a spill or leak from equipment use or removal. In the rare event of a spill, absorbent material would be used to prevent chemicals or oils from being diverted off-site. In addition, design features, as well as mitigation measures, would be implemented to reduce impacts resulting from hazardous materials spillage or leaking to a less than significant level. As a result, the proposed project would not create significant irreversible changes in the form of environmental accidents.

**Effects Found Not To Be Significant**

CEQA requires a statement indicating the reasons that various possible significant effects of a proposed project were found to be not significant. The analysis for the proposed Otay Valley Quarry Reclamation Plan Amendment project by the City of Chula Vista determined that the project would result in environmental effects that were considered to be not significant and were not further analyzed in this EIR. The proposed project would not have the potential to cause significant effects associated with Recreation.

**Project Alternatives**

CEQA requires that an EIR describe a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain most of the basic project objectives, and to evaluate the comparative merits of the alternatives. Section 9.0, *Alternatives*, of this EIR discusses potential alternatives to the proposed Otay Valley Quarry Reclamation Plan Amendment project and evaluates potential environmental impacts, as required by CEQA. These alternative development scenarios have been developed in accordance with the CEQA Guidelines and are directed at addressing alternative projects which have the potential to reduce or avoid potentially significant impacts associated with implementation of the proposed Otay Valley Quarry Reclamation Plan Amendment project. The alternatives considered for the proposed project include the following:

- Alternative 1 – No Project/No Build Alternative
- Alternative 2 – No Project/Development Under Existing Approvals
- Alternative 3 – Benched Alternative
- Alternative 4 – Fill Alternative

The environmental analysis of alternatives presented above is summarized in Table 9-1, *Comparison of Alternatives to Proposed Project*.

### **Environmentally Superior Alternative**

CEQA requires that the EIR identify the environmentally superior alternative among all of the alternatives considered, including the proposed project. If the No Project Alternative is selected as environmentally superior, then the EIR shall also identify an environmentally superior alternative among the other alternatives.

None of the alternatives evaluated in the EIR are considered “environmentally superior” to the proposed project. The No Project/No Build Alternative does not satisfy project objectives and would actually result in a greater impact because the enhancements to the site through reclamation would not be realized. Additionally, that alternative would not be in compliance with State and local regulations that require reclamation of a mine site upon completion of mining. The Fill Alternative could be considered the “environmentally superior” alternative, as it would leave the site in a manner that would, over time, be more reflective of the natural landform. However, implementation of that alternative would result in substantially greater environmental impacts associated with several other environmental issues.

### **Areas of Controversy/Issues to be Resolved**

Pursuant to CEQA Guidelines Section 15123(b)(2), an EIR shall identify areas of controversy known to the Lead Agency, including issues raised by other agencies and the public, and issues to be resolved including the choice among alternatives and whether and how to mitigate for significant effects. The NOP for the EIR was distributed October 25, 2010, for a 30-day public review and comment period. In addition, a Public Scoping Meeting was held on November 8, 2010. Comments received in response to the NOP and at the public scoping session present issues to be addressed in the EIR.

Presented in Table ES-2, *Summary of NOP Responses and Scoping Meeting Comments*, is a summary of comments received as part of the City scoping process. (Please see Appendix A, *Notice of Preparation and Comment Letters*, for copies of the NOP and response letters.)

**TABLE ES-2. SUMMARY OF NOP RESPONSES AND SCOPING MEETING COMMENTS**

Issue Raised	Response
Department of Fish and Game – December 8, 2010	
<p>The California Department of Fish and Game letter focused on project compliance with the City's MSCP Subarea Plan. This letter requests:</p> <ol style="list-style-type: none"> <li>1. all requirements and conditions of the Subarea Plan and Implementing Agreement are to be met</li> <li>2. biological issues that are not addressed in the Subarea Plan and Implementing Agreement be addressed in the EIR</li> <li>3. a description of why the proposed project, irrespective of other alternatives to the project, is consistent with and</li> </ol>	<p>Section 4.6, <i>Biological Resources</i>, discusses potential impact to biology and biological resources, including adjacent Preserve areas.</p> <p>A Boundary Adjustment was processed and approved prior to the drafting of this EIR. The Boundary Adjustment is summarized in Section 2.5, <i>Multiple Species Conservation Program (MSCP)</i>, of this EIR.</p>



<p>appropriate in the context of the Subarea Plan</p> <ol style="list-style-type: none"> <li>the EIR fully describe and clarify the proposed boundary adjustment and provide figures and detail about restoration to occur as agreed to in the boundary adjustment</li> <li>the EIR identify the measures the project applicant will implement to protect resources adjacent to Preserve areas</li> <li>the EIR require that updated surveys for sensitive species within the adjacent Preserve areas be conducted within a year prior to the onset of the implementation of the proposed project; and</li> <li>the EIR acknowledge that, based on the survey results, it may be necessary to prepare supplemental CEQA documentation for the proposed project.</li> </ol>	
<b>California Native Plant Society – December 21, 2010</b>	
<p>The California Native Plant Society letter focused mainly on project avoidance of impacts to sensitive and/or rare plant species. This letter requests:</p> <ol style="list-style-type: none"> <li>the City require current and up-to-date botanical surveys and to propose avoidance to rare plants where possible.</li> <li>the conservation of Special Status species, such as Maritime Succulent Scrub, and other locally rare species.</li> <li>the limits of existing disturbed area not be expanded.</li> </ol>	<p>Section 4.6, <i>Biological Resources</i>, discusses potential impact to biology and biological resources, including adjacent species. Additionally, Section 3.0, <i>Project Description</i>, provides detailed tables and discussion of proposed revegetation plant palettes to be prepared by a qualified landscape architect.</p>
<b>San Diego County Archaeological Society, Inc. – November 3, 2010</b>	
<p>The San Diego County Archaeological Society letter acknowledges receipt of the NOP and requests to be included on the distribution list of the DEIR, as well as to receive a copy of the cultural resources technical report.</p>	<p>A copy of the EIR and all cultural reports will be sent to the San Diego County Archaeological Society, as requested. <i>Cultural Resources</i> have been evaluated in Section 4.7.</p>
<b>Native American Heritage Commission – November 2, 2010</b>	
<p>The Native American Heritage Commission letter indicates that no known Native American cultural resources are present in the project area; however, provisions should be included should archaeological resources be discovered during reclamation.</p>	<p>A cultural resources study was conducted for the project and is summarized in Section 4.7, <i>Cultural Resources</i>. Mitigation has been included to ensure that potential impacts associated with previously unknown cultural resources that may be encountered during reclamation are mitigated to below a level of significance.</p>
<b>Department of Toxic Substances Control – November 9, 2010</b>	
<p>The Department of Toxic Substances Control letter identifies the need for the DEIR to address hazardous wastes/substances at the project site and in the surrounding area; for any investigation to be summarized in the document; and for a regulatory agency to oversee investigations, samplings, and/or remedial actions.</p>	<p>Potential project impacts relative to human health, public safety, and hazardous materials are discussed in Section 4.13, <i>Hazards/Risk of Upset</i>, and mitigation measures are identified.</p>
<b>Department of the Army – December 9, 2010</b>	
<p>The Department of the Army letter identifies the potential need for project reclamation to obtain a Department of the Army permit from the United States Army Corps of Engineers should the project affect waters of the United States or navigable waters of the United States.</p>	<p>Waters of the United States are discussed in Section 4.6, <i>Biological Resources</i>. The project would not impact waters of the United States or navigable waters of the United States.</p>
<b>Scoping Meeting Comments – November 8, 2010</b>	
<p>The following general questions and comments were presented at the Scoping meeting:</p> <ol style="list-style-type: none"> <li>How will the mine look following mining?</li> <li>The EIR should include a "total habitat restoration" alternative.</li> <li>What is the total capacity of the water body?</li> <li>What is the ability to and impacts of filling in the</li> </ol>	<ol style="list-style-type: none"> <li>The Project Description (Section 3.0) and Landform Alteration/Aesthetics (Section 4.2) include a discussion of how the Project Site will look following mining and following reclamation.</li> <li>The Alternatives Section of the EIR (Section 9.0) includes a discussion of the "Fill Alternative", which would essentially restore the site to natural conditions.</li> <li>3/4. The water body is discussed in Section 3.0 (Project Description).</li> </ol>

depression rather than creating a water body?	
5. Will the project re-locate sensitive species?	5. The portion of the Project Site where reclamation would occur in accordance with the Reclamation Plan Amendment does not contain any sensitive species. Section 4.6 (Biological Resources) addresses biological resources occurring on the Project Site.

# 1.0 INTRODUCTION

## 1.1 PURPOSE AND LEGAL AUTHORITY

This Environmental Impact Report (EIR) is an informational document intended for use by the City of Chula Vista, other public agencies, and members of the general public in evaluating the potential environmental effects of the Otay Valley Quarry Reclamation Plan Amendment project. This document has been prepared in accordance with, and complies with, all criteria, standards and procedures of the California Environmental Quality Act (CEQA) of 1970 as amended [Public Resources Code (PRC) Section 21000 et seq.], State CEQA Guidelines [California Administrative Code (CAC) Section 15000 et seq.], and the City of Chula Vista's environmental documentation procedures. Per Section 21067 of CEQA and Sections 15367 and 15050 through 15053 of the State CEQA Guidelines, the City of Chula Vista is the *Lead Agency* under whose authority this document has been prepared.

In accordance with CEQA Guidelines Section 15161, this document constitutes a "Project EIR" and has been "focused primarily on the changes in the environment that would result from the development project." (For purposes of this EIR, the proposed Otay Valley Quarry Reclamation Plan Amendment is regarded as "the development project".) This EIR provides decision-makers, public agencies, and the general public with detailed information about the potential significant adverse environmental impacts of the proposed Otay Valley Quarry Reclamation Plan Amendment. By recognizing the environmental impacts of the proposed project, decision-makers will have a better understanding of the physical and environmental changes that would accompany the approval of the project. The EIR includes recommended mitigation measures which, when implemented, will lessen or avoid project impacts. The development of mitigation measures to lessen or avoid project impacts provides the Lead Agency with ways to substantially lessen or avoid significant effects of the project on the environment, whenever feasible. Alternatives to the proposed project are presented to evaluate alternative project scenarios that can further reduce or avoid any significant impacts associated with the project.

### 1.1.1 Authority and Intended Uses of the EIR

Acting as the Lead Agency, the City of Chula Vista has determined that the Otay Valley Quarry Reclamation Plan Amendment project has the potential to create significant adverse environmental impacts. Therefore, preparation of an EIR is required as part of the project's environmental review process, in accordance with CEQA.

The analysis and findings in this document reflect the independent conclusions of the City of Chula Vista. Based on an environmental initial study conducted for the project, comments received at the public scoping session held on November 8, 2010, and the comments received in response to the Notice of Preparation (NOP) dated October 25, 2010 (see Appendix A), this EIR discusses the potential significant adverse effects of the project on a number of environmental issues. Where environmental impacts have been determined to be potentially significant, this EIR presents mitigation measures directed at reducing those adverse environmental effects and makes a determination relative to the ability of the mitigation measures to reduce impacts to below a level of significance.

In addition, feasible alternatives to the proposed project have been developed. The impacts of those project alternatives, when compared to those of the proposed project, provide a basis for consideration by decision-makers.

### **1.1.2 Availability and Review of the Draft EIR**

After completion of the Draft EIR, a Notice of Completion (NOC) is filed with the State Office of Planning and Research (OPR) to inform the public and interested and affected agencies of the availability of the Draft EIR for review and comment. In addition, the Draft EIR is distributed directly to affected public agencies and to interested organizations for review and comment.

The EIR and all related technical studies are available for review at the offices of the City of Chula Vista, Planning and Building Department, Planning Division, located at 276 Fourth Avenue, Chula Vista, CA 91910. Copies of the Draft EIR and technical appendices are also available for review at the following public libraries:

Eastlake Branch  
1120 Eastlake Parkway  
Chula Vista, California 91913

Civic Center Branch  
365 F Street  
Chula Vista, California 91910

South Chula Vista Branch  
389 Orange Avenue  
Chula Vista, California 91911

Agencies, organizations, and individuals have been invited to comment on the information presented in the Draft EIR during a 45-day public review period. Specifically, comments addressing the scope and adequacy of the environmental analysis have been solicited. Respondents have also been asked to provide or identify additional environmental information and/or other feasible alternatives that are germane to the project, but which they feel may not have been addressed in the analysis. Following the public review period, responses to the public review comments relevant to the adequacy and completeness of the EIR were prepared and compiled into the Final EIR. The City of Chula Vista, prior to any final decision on the project, will consider the Final EIR for certification.

## **1.2 SCOPE AND CONTENT OF EIR**

### **1.2.1 Scope of EIR**

In accordance with Section 15082 of the CEQA Guidelines, a Notice of Preparation (NOP), dated October 25, 2010, has been prepared for the project, all Responsible and Trustee Agencies, as well as other public agencies and members of the public who may have an interest in the project. The purpose of the NOP was to solicit comments on the scope and analysis to be included in the EIR for the proposed Otay Valley Quarry Reclamation Plan Amendment project. A copy of the NOP and letters received in response to the NOP are included in Appendix A of the Technical Appendices to this EIR. In addition, comments were also gathered at a public scoping session held for the project on November 8, 2010.

A discussion of the issue areas that are identified in the NOP as having a potential for environmental impacts and the project's compliance with City Thresholds and Standards Policy, as well as Findings of Fact, are included in the EIR. The EIR also addresses issues raised in response to the NOP and at the public scoping meeting, as provided by various affected and interested agencies.

Based on an initial review of the project, the City of Chula Vista determined that the EIR for the proposed project should address the following environmental issues:

- Land Use, Planning, and Zoning
- Landform Alteration/Aesthetics
- Traffic, Circulation, and Access
- Noise
- Air Quality
- Biological Resources
- Cultural Resources
- Paleontological Resources
- Agricultural Resources
- Hydrology/Drainage/Water Quality
- Geology and Soils
- Public Services and Utilities – including Compliance with the City Threshold and Standards Policy
- Hazard/Risk of Upset
- Housing and Population
- Greenhouse Gas Emissions

### 1.2.2 Format of EIR

Under each issue area presented above, Section 4.0, *Environmental Analysis*, of this EIR includes a description of the existing conditions relevant to each environmental topic; presents the threshold(s) of significance for the particular issue area under evaluation; assesses any impacts associated with implementation of the project as evaluated against the particular environmental issue; identifies the level of significance of any project impacts; presents recommended mitigation measures and mitigation monitoring and reporting, as appropriate, for each significant impact; and concludes the level of significance after implementation of mitigation measures. *Cumulative Impacts* are presented under a separate discussion section (Section 5.0) based on issues that were found to be potentially cumulatively significant. Section 6.0, *Effects Not Found to be Significant*, presents a brief discussion of the environmental effects of the project that were evaluated as part of the Initial Study process and were found not to be potentially significant. The EIR also includes mandatory CEQA discussion areas (Sections 7.0 and 8.0), which present a discussion of *Significant Irreversible Environmental Changes* and *Growth Inducement*, respectively, as well as a discussion of project *Alternatives* (Section 9.0) which could avoid or reduce potentially significant environmental impacts associated with implementation of the project. Based on this general format, the following presents an outline of the various sections of the EIR for the Otay Valley Quarry Reclamation Plan Amendment project:

- **Executive Summary.** An overview of the EIR, a description of the proposed project and a summary of impacts and mitigation measures are provided in this section. Areas of controversy, as well as any issues to be resolved, are also presented.
- **Section 1.0: Introduction.** The purpose of the EIR and a discussion of the public review process are provided in this section. This section also includes the scope and format of the EIR.
- **Section 2.0: Environmental Setting.** This section provides a description of the project location and the environment of the project site, as well as the vicinity of the project site, as it exists before implementation of the proposed project. A summary of the project's relationship to the City's General Plan, the City's Multiple Species Conservation Program (MSCP), and existing zoning is also included as part of the Environmental Setting. This section also defines related projects and assumptions used as a basis for the discussion of cumulative effects.

- **Section 3.0: Project Description.** This section outlines the physical and operational characteristics of the project based on the following subsections:

*Location and Boundaries* - Provides a description of the size, boundaries, and location of the project at the local and regional level. Supporting graphics have been provided.

*Statement of Objectives:* Defines the objectives and underlying purpose of the project. The Statement of Project Objectives, in conjunction with an identification of the project's significant impacts, provides the basis for the evaluation of project alternatives presented in Section 9.0 of this EIR.

*Project Characteristics:* Provides an overview of the project and describes its specific attributes. This section also states the timeframe for project construction and phasing, required discretionary actions and approvals, agencies expected to use this EIR, and any Federal, State, or local environmental review and consultation requirements related to the CEQA process.

- **Section 4.0: Environmental Analysis.** The existing environmental setting, potential environmental impacts, and recommended mitigation measures are discussed in this section. Where mitigation is proposed, the level of significance after mitigation measures are implemented is also identified in this section.
- **Section 5.0: Cumulative Effects.** This section describes past, present, and reasonably anticipated future projects in the surrounding area, which, in concert with build-out of the City's General Plan, may potentially contribute to significant cumulative impacts in the area. The impacts of any related projects in conjunction with the proposed project are analyzed in this section.
- **Section 6.0: Effects Found Not to be Significant.** This section identifies the issues where potential impacts were considered to not be significant during the initial study process and describes the reasons why these possible significant environmental effects were deemed not to be significant. For the Otay Valley Quarry Reclamation Plan Amendment project, Recreation was determined during the Initial Study not to be potentially significant and, therefore, is not analyzed in Section 4.0 of this EIR. A brief discussion of Recreation and why this area was determined not to be potentially significant is presented in this section.
- **Section 7.0: Significant Irreversible Environmental Changes.** This section describes potentially significant irreversible environmental changes that may be expected with the development of the proposed project.
- **Section 8.0: Growth Inducement.** This section discusses the project's potential to foster economic or population growth in the adjacent areas or in the City, either directly or indirectly.
- **Section 9.0: Alternatives.** Alternative projects or development scenarios, which may occur on the site and meet most of the project's objectives, are described in this section. Alternative sites where the proposed project may be feasibly constructed are also discussed. Specifically, the Alternatives section of this EIR addresses the following project alternatives:

**Alternatives Considered But Rejected:**

- Alternative Locations

**Alternatives Considered:**

- Alternative 1 – No Project/No Build Alternative
- Alternative 2 – No Project/Development Under Existing Approvals
- Alternative 3 – Benched Alternative
- Alternative 4 – Fill Alternative

As required by CEQA Guidelines Section 15126.6(e)(2), the Alternatives discussion concludes with identifying the Environmentally Superior Alternative

- **Section 10.0: Mitigation Monitoring and Reporting Program.** This section documents the various mitigation measures required as part of the project, timing for each mitigation measure, and the responsible party for implementing the mitigation measure.
- **Section 11.0: References, Persons and Agencies Contacted, EIR Preparation.** A list of the reference materials consulted in the course of the EIR's preparation is included in this section. Agencies and individuals contacted during preparation of the EIR are identified in this section, as well as persons and agencies responsible for the preparation of the EIR.

The Technical Appendices are printed under separate cover as an accompaniment to this EIR. The appendices contain the various supporting documents used in preparing the EIR, including:

- Notice of Preparation and Comment Letters (Appendix A)
- Visual Resources Letter for Otay Valley Quarry Reclamation Plan (Appendix B)
- Transportation/Traffic Letter for Otay Valley Quarry Reclamation Plan (Appendix C)
- Otay Valley Quarry Reclamation Plan Acoustical Assessment Report (Appendix D)
- Air Quality Technical Report (Appendix E)
- Biological Resources and Impacts Analysis Letter (Appendix F)
- Cultural Resources Letter (Appendix G)
- Water Quality Report (Appendix H)
- Stormwater Hydrology Study (Appendix I)
- Hydrogeology Study for Otay Valley Quarry (Appendix J)
- Preliminary Geotechnical Evaluation (Appendix K)
- Otay Quarry EDR Search (Appendix L)
- City of Chula Vista Resolution Affirming a Vested Legally Non-Conforming Use (Appendix M)
- Declaration of Covenants of Operation (Appendix N)

**1.2.3 Incorporation by Reference**

As permitted by Section 15150 of the CEQA Guidelines, this EIR has referenced several technical studies, analyses, and reports. Information from the documents, which has been incorporated by reference into this EIR, has been briefly summarized; the relationship between the incorporated part of the referenced

document and the EIR is described. The documents and other sources, which have been used in the preparation of this EIR, are identified in Section 11.0, *References, Persons and Agencies Contacted, EIR Preparation*.

In accordance with Section 15150(b) of the CEQA Guidelines, the location where the public may obtain and review these referenced documents and other sources used in the preparation of the EIR is also identified (see Section 1.1.2).

### 1.3 RESPONSIBLE AND TRUSTEE AGENCIES

State law requires that all EIRs be reviewed by trustee and responsible agencies. A Trustee Agency is defined in Section 15386 of the State CEQA Guidelines as “a state agency having jurisdiction by law over natural resources affected by a project that is held in trust for the people of the State of California.” Per Section 15381 of the CEQA Guidelines, “the term ‘Responsible Agency’ includes all public agencies other than the Lead Agency which have discretionary approval power over the project.”

For the Otay Valley Quarry Reclamation Plan Amendment project, one State agency - the California Department of Conservation – would have responsibility for reviewing the Reclamation Plan. The Department of Conservation (CDC) provides services and information that promote environmental health, economic vitality, informed land-use decisions, and sound management of California’s natural resources. Particularly relevant to the Otay Valley Quarry Reclamation Plan Amendment project is the Office of Mine Reclamation (OMR), which administers the Surface Mining and Reclamation Act of 1975 (SMARA). SMARA addresses the need for a continuing supply of mineral resources, while at the same time preventing or minimizing impacts to public health, property, and the environment. SMARA is applicable to surface mining activities that affect more than one acre.

In accordance with SMARA regulations, the proposed Otay Valley Quarry Reclamation Plan Amendment has been sent to OMR for review. The OMR review has been conducted coincident to the public review period of this EIR and prior to action on the project by City Council.



## 2.0 ENVIRONMENTAL SETTING

### 2.1 REGIONAL SETTING

This EIR addresses potential environmental impacts associated with the proposed Otay Valley Quarry Reclamation Plan Amendment project, which is located in the East Plan Area of the City of Chula Vista, within San Diego County (see Figure 2-1, *Regional Map*). The City of Chula Vista covers approximately 50 square miles in the southwestern section of San Diego County, in southern California. The City is located approximately seven miles north of the United States-Mexico border and is bordered on the north by National City and San Diego County. To the south, Chula Vista is bordered by the San Diego communities of Otay Mesa-Nestor and Otay Mesa. On the east, the City of Chula Vista is bordered by San Diego County; and on the west, Chula Vista is bordered by National City.

### 2.2 PROJECT LOCATION

As shown in Figure 2-2, *Project Location Map*, the Otay Valley Quarry Reclamation Plan Amendment Project Site is bordered on the south by Heritage Road and Wiley Road, as well as the Otay River Valley; on the west by Wolf Canyon; and on the north and east by open space areas. Primary access to the Project Site is provided by Heritage Road. There are no improved roadways through the Project Site.

The Project Site is immediately surrounded by open space uses within the City of Chula Vista; urban land uses are located beyond the immediate open space uses. To the west are industrial uses, as well as Cricket Wireless Amphitheatre, an outdoor regional entertainment venue, and Knott's Soak City, a regional waterpark. To the south of the Project Site, beyond the open space uses, are industrial uses dominated by automobile wrecking yards and Brown Field Municipal Airport, located within the City of San Diego, as well as the San Diego community of Otay Mesa. North of the Project Site, beyond the open space uses, are residential developments of Chula Vista, as well as commercial/retail uses and public and private schools. East of the Project Site are predominantly open space land uses of the City of Chula Vista and unincorporated San Diego County. (See Figure 2-3, *Aerial Photograph*.)



**Figure 2-1. Regional Map**



## 2.0 ENVIRONMENTAL SETTING

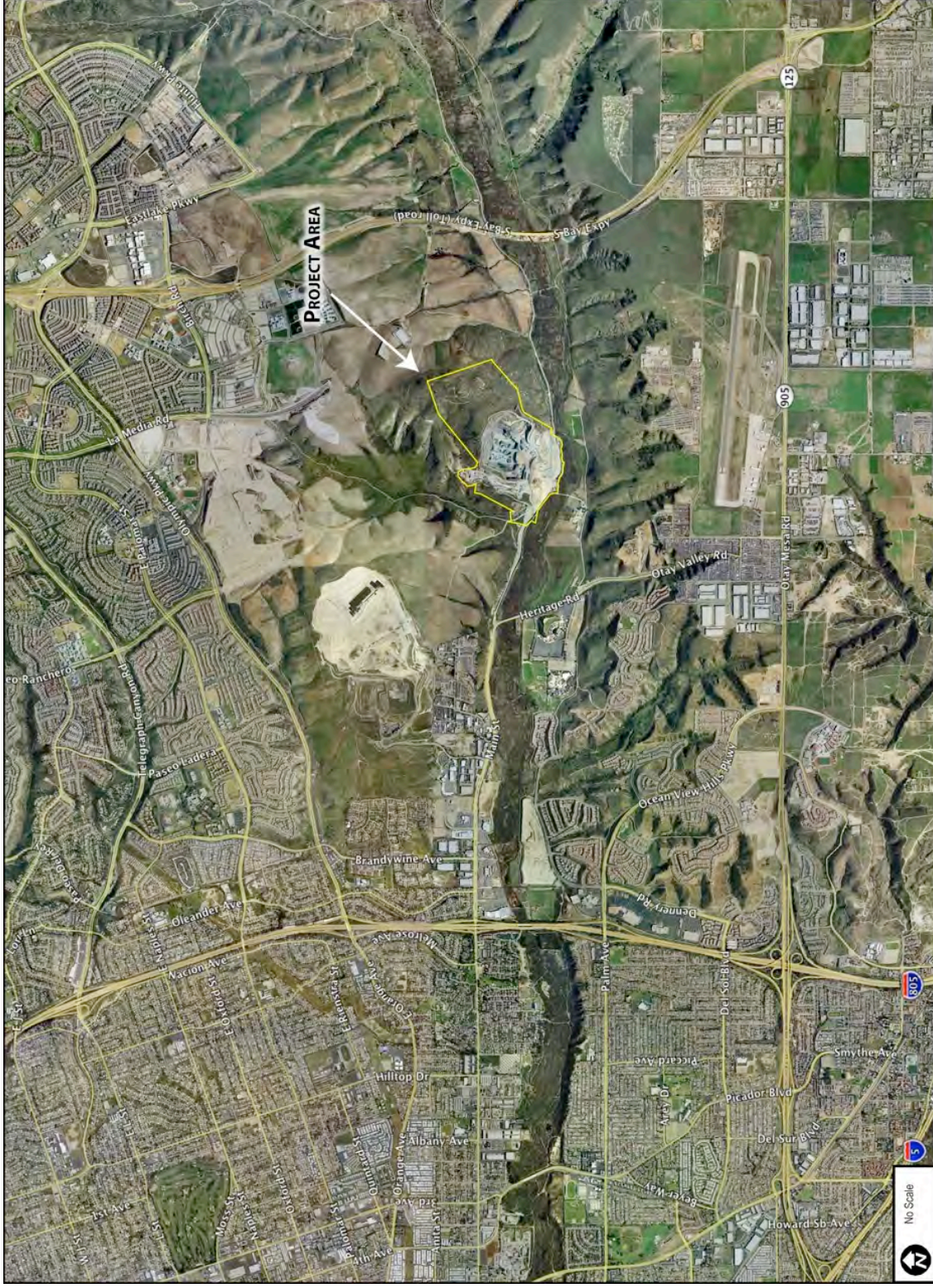


Figure 2-2. Project Location Map





Figure 2-3. Aerial Photograph

### 2.3 EXISTING SITE CONDITIONS

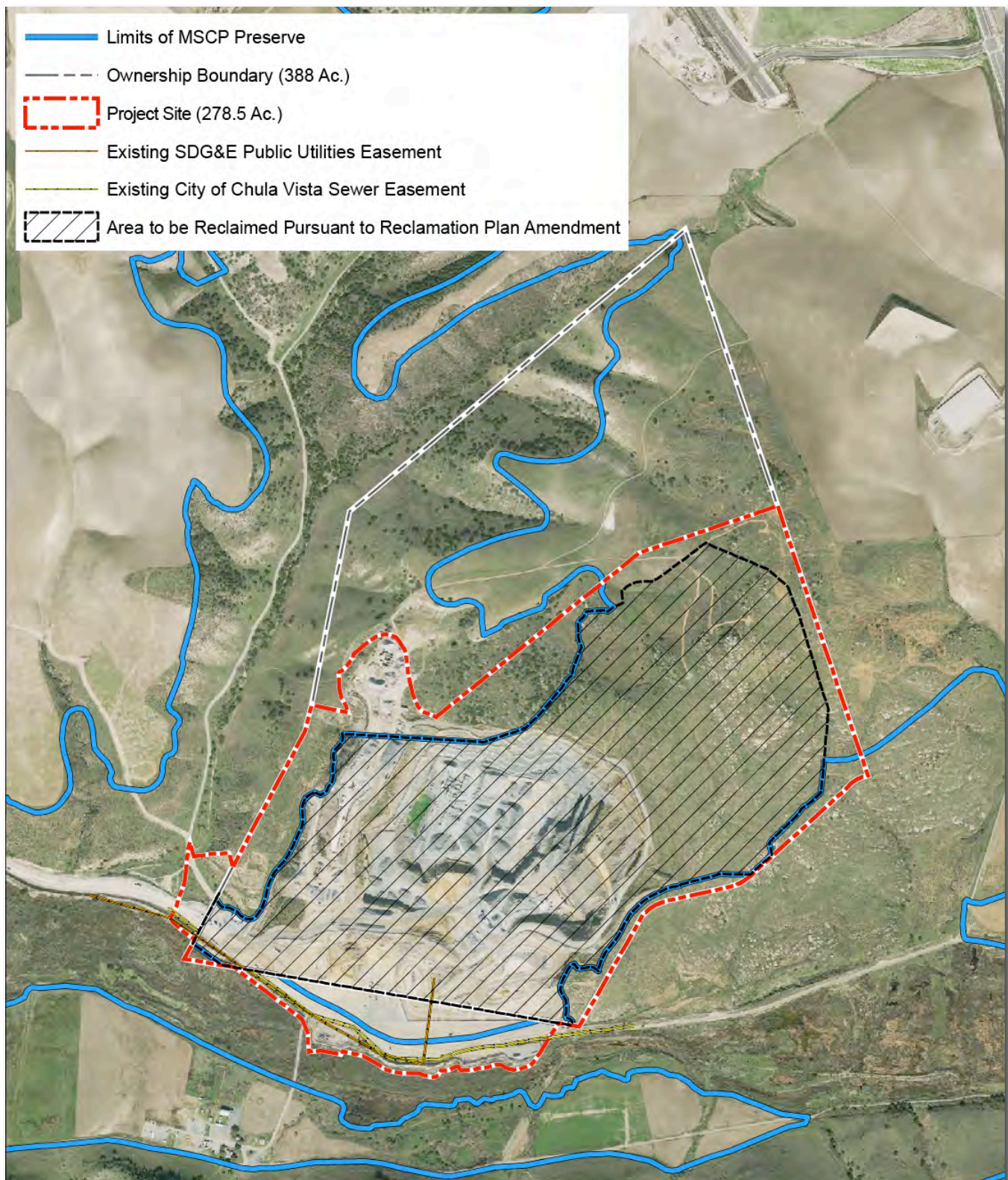
The Otay Valley Quarry Reclamation Plan Amendment site ("Project Site") encompasses approximately 278 acres, of which 197 acres would be reclaimed pursuant to the proposed Reclamation Plan Amendment. The Project Site is an active resource mining and extraction area where mining has or will occur over the life of the Otay Valley Quarry. Reclamation would occur on the 197 acres upon resource depletion (estimated to be around the year 2089). (Note: Some stages of reclamation may occur in the intermediate term as outlined in Section 3.6.1, *Reclamation Plan Phasing*. However, final and complete reclamation would occur after mineral depletion, around 2089.) The Quarry Boundary lies within the greater "Ownership Boundary," which encompasses 388 acres. Portions of the Ownership Boundary (approximately 110 acres) are located outside the Project Site and Quarry Boundary and remain in a natural, undisturbed state.

Figure 2-4, *Existing Conditions – Otay Valley Quarry*, shows the current condition of the Project Site at the time of preparation of this EIR. The Project Site as shown in Figure 2-4, represents the limits of mining that will occur in accordance with vested rights in effect for the mine.

The Otay Valley Quarry Reclamation Plan Amendment is an amendment to the existing approved Reclamation Plan for the Quarry Boundary (Otay Ranch Pit Reclamation Plan Amendment, California Mine Pit ID# 91-37-0035). Portions of the Project Site have initiated reclamation activities pursuant to the Otay Ranch Pit Reclamation Plan Amendment. Figure 2-5, *Existing Conditions – Substantially Initiated Parcels*, shows the portions of the Project Site that have been substantially initiated pursuant to the Otay Ranch Pit Reclamation Plan Amendment. These areas are identified as the "North Parcel," "West Parcel," and "South Parcel." The West Parcel (7.02 acres) has already been reclaimed in accordance with the Otay Ranch Pit Reclamation Plan Amendment. The South Parcel (21.86 acres) has substantially initiated reclamation activities and shall remain subject to the requirements and success criteria established in the Otay Ranch Pit Reclamation Plan Amendment.

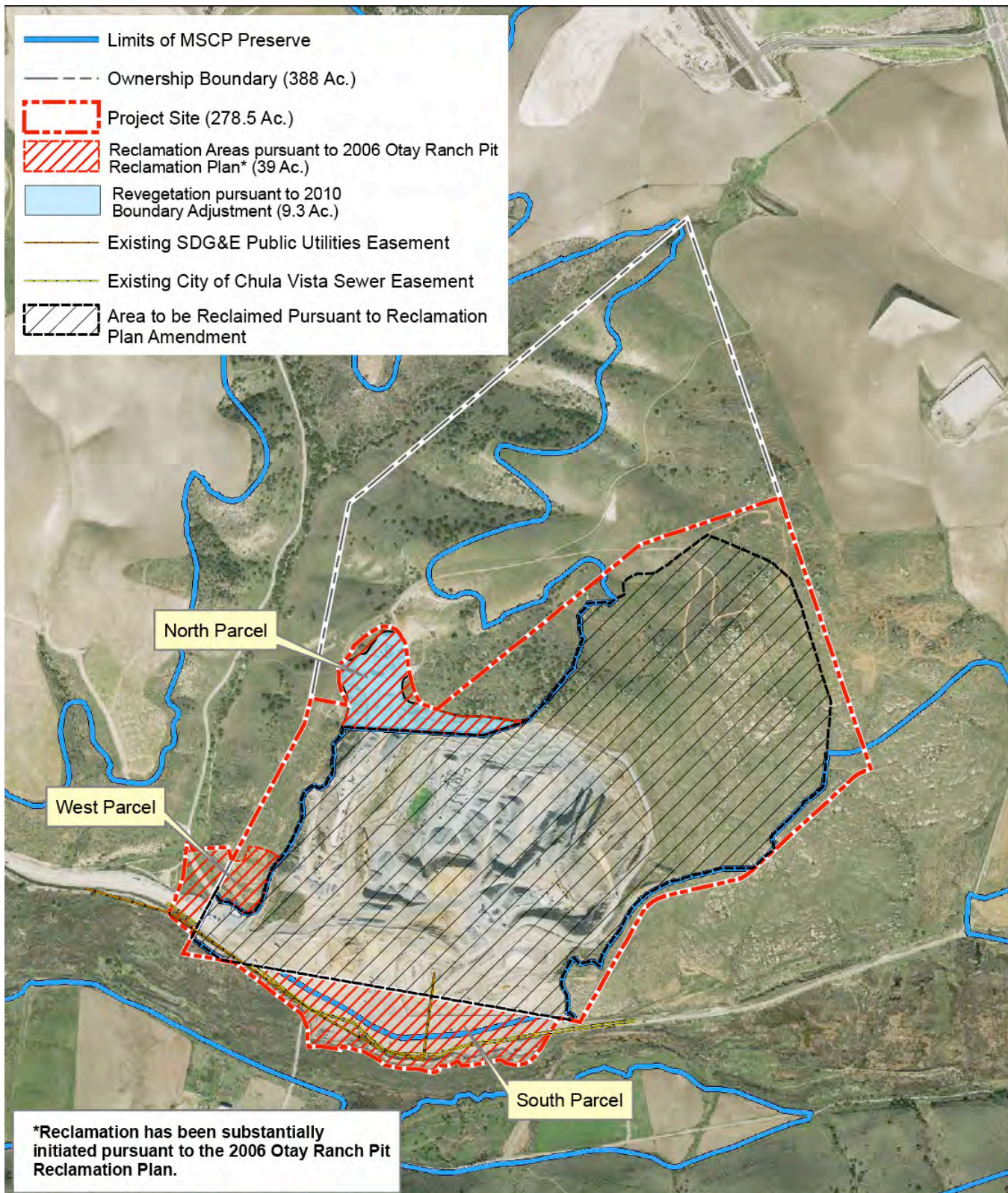
The North Parcel (10.4 acres) has substantially initiated reclamation activities, and future reclamation and revegetation of this parcel would comply with the Otay Ranch Pit Reclamation Plan Amendment, as well as additional requirements of the Otay Quarry MSCP Boundary Adjustment (Chula Vista Case Number PCM-10-14); however, the fill identified in the Otay Ranch Pit Reclamation Plan Amendment would no longer be placed on the North Parcel. More specifically, the 9.3-acre portion of the North Parcel subject to the MSCP Boundary Adjustment will be revegetated pursuant to the Boundary Adjustment document, while the portions of this parcel not covered under the Boundary Adjustment will be reclaimed and revegetated pursuant to the Otay Ranch Pit Reclamation Plan Amendment. (For a discussion of the approved Boundary Adjustment, see Section 2.5, below.)





**Figure 2-4. Existing Conditions – Otay Valley Quarry**





**Figure 2-5. Existing Conditions – Substantially Initiated Parcels**

### 2.3.1 Topography

The Otay Valley Quarry Reclamation Plan Amendment Project Site is located near the base of the Otay River Valley. Rock Mountain is located in the northern portion of the Project Site, extending to the northeast. The south slopes of the Otay River Valley occur south of the Project Site. As mining operations continue on-site, the site topography is in a state of flux. Resources are being mined, altering site conditions. Section 4.2, *Landform Alteration/Aesthetics*, of this EIR provides a detailed description of the site topography and evaluates the potential for the project to affect landform and aesthetics.

Upon completion of mining, the Project Site will be configured as an open pit. The final phase of mining will consist of the elimination of some of the horizontal benches typical of hard rock mining and creation of areas of sheer slopes to conform with surrounding landforms. The quarry floor is planned at a maximum depth of approximately 300 feet below mean sea level. (Quarry floor elevations will be revised during the final stages of mining as overburden stockpile locations are combined and relocated to the quarry floor.) Quarry high walls are designed to be cut at a grade not to exceed 1:1 for a stable condition, except in the areas where benching will be eliminated to create sheer slopes. Sheer slopes may be near vertical in places. The depression resulting from mining will fill naturally with groundwater and run-off from the surrounding slopes.

### 2.3.2 Biological Resources

The Project Site is located adjacent to the Otay River, which, eight miles to the west, drains to the Pacific Ocean. The site is also near the Upper and Lower Otay Reservoirs, which are approximately four miles east of the quarry. Within the quarry itself, surface water has pooled on the quarry floor and will continue to do so as mining continues and the reclamation project progresses.

Because the Project Site is the location of an on-going mining operation, native vegetation and biological resources located within the boundary of the mining operations are essentially non-existent. Plant communities surrounding the reclamation area include coastal sage scrub, non-native grassland, and disturbed lands. Wildlife species on Rock Mountain surrounding the reclamation area are common to the region. Special-status plant and wildlife species may occur within the Rock Mountain area surrounding the reclamation area and outside the Project Site. The potential for these species is based on both the biology studies conducted for the Reclamation Plan Amendment and the regional mapping prepared for the MSCP.

Section 4.6, *Biological Resources*, addresses the project's potential for direct and indirect impacts to biological resources located on the Project Site, as well in the surrounding areas.

### 2.3.3 Cultural Resources

While the Project Site is located in an area of high sensitivity for archeological resources, because of the on-going sand and aggregate mining operations, resource potential is limited. Results of the records search indicate that no previously recorded cultural resources are located within the project area. *Cultural Resources* are addressed in Section 4.7 of this EIR.

### 2.3.4 Geologic Conditions

The Project Site is located within the Peninsular Ranges Geomorphic Province of California, which is characterized by a series of rugged, northwest-trending mountain ranges separated by subparallel faults, with a coastal plain of subdued landforms in the western portion of the province. The Otay Valley Quarry is



located on Rock Mountain, on the eastern edge of the coastal plain. Rock Mountain is a basement high of Jurassic Age Santiago Peak Volcanics, composed of andesitic volcanic breccias, site flows, and welded breccia tuffs. The majority of the Project Site is underlain by Santiago Peak Volcanics. Smaller areas of Otay Formation, Mission Valley Formation, and Stream-Terrace Deposits are present in the southwest portion of the Project Site. Rock Mountain is considered a regionally-significant mineral reserve by the California Division of Mines and Geology, with a state land classification of Mineral Resource Zone 2 (MRZ-2) deposit, containing Portland cement concrete-grade aggregate.

*Geological and Soils* are addressed in Section 4.11 of this EIR. Section 4.15 addresses *Mineral Resources*.

### 2.3.5 Paleontological Resources

As presented under 2.5.4, *Geologic Conditions*, above, the Project Site is predominantly underlain by Santiago Peak Volcanics, which does not have a potential to contain important paleontological resources. However, the Project Site also contains small areas of Otay Formation, Mission Valley Formation, and Stream-Terrace Deposits. Both Otay and Mission Valley Formations have the potential to contain important fossiliferous materials. Stream-Terrace Deposits have a low potential for uncovering paleontological resources. *Paleontological Resources* are addressed in Section 4.8.

### 2.3.6 Visual Resources

Views of the Project Site include current mining and natural resources processing activities, disturbed land and associated vegetation, exposed cut slopes, and mining operation equipment. The topography of the Project Site, as well as intermittent stockpile locations, operational equipment, and processing plant facilities, limit views within and around the quarry. On-going mining creates quarry slopes cut at a variety of slope gradients ranging from a maximum of 2:1 to approximately 8:1 on fill slopes and 1:1 slopes with intermittent near vertical cuts on the quarry sidewalls. Surrounding views include northwesterly views of Wolf Canyon, westerly views of Cricket Wireless Amphitheater, and southwesterly views of Chula Vista urban development, as well as views of rolling hills and open space to the north, east, and southeast.

The Project Site is located within the 28-mile designated open space area of the Chula Vista Greenbelt that surrounds the City of Chula Vista. The Greenbelt consists of general open space, the City's MSCP Preserve lands, trails, and connections between City public parks. Additionally, the Otay Valley Regional Park Concept Plan's trail location would be directly south adjacent to the Project Site boundary. Views of the Project Site can be seen in the foreground and middleground from the south and southwest towards the Otay River bank.

According to the California Department of Transportation (Caltrans) State Scenic Highway Program Map, there are no state scenic highways within the Project Site vicinity. The closest State Scenic Highway to the Project Site is SR-75, which is located west of the Project Site and runs from Imperial Beach to Coronado. This highway was designated due to its views of the Pacific Ocean and San Diego Bay to the west. A portion of I-5 located south of SR-75 is considered an "eligible" state scenic highway, but is not officially designated (Caltrans 2009). Scenic Roadways denoted in the Chula Vista General Plan are located within the Project Site vicinity. Scenic Roadways within the project vicinity include Main Street, from I-805 to Heritage Road; Heritage Road, from Telegraph Canyon Road to the City's southerly boundary; Rock Mountain Road, from Heritage Road to SR-125; and La Media Road, from Otay Lakes Road to Rock Mountain Road (City of Chula Vista 2005).

Included within Section 4.2, *Landform Alteration/Aesthetics*, of this EIR is a detailed discussion of the visual quality impacts associated with the proposed project.

### 2.4 PLANNING CONTEXT

The Otay Valley Quarry Reclamation Plan Amendment project is subject to review under the City of Chula Vista's adopted plans and policies. Applicable plans and policies include the adopted City of Chula Vista General Plan and the Chula Vista MSCP Plan. The analysis contained within this EIR compares project-related impacts to the adopted Chula Vista General Plan and the Chula Vista MSCP Plan, as well as applicable subsections within these documents.

#### 2.4.1 Land Use

The City of Chula Vista is divided into four General Plan Areas (Bayfront Plan Area, Northwest Plan Area, Southwest Plan Area, and East Plan Area). The Otay Valley Quarry Reclamation Plan Amendment project is located in the East Planning Area, which is further divided into six subareas – East Main Street Subarea, Unincorporated Sweetwater Subarea, Otay Ranch Subarea, Master Planned Communities Subarea, Unincorporated East Otay Ranch Subarea, and Other Miscellaneous Areas Subarea. The Otay Valley Quarry Reclamation Plan Amendment project is located within the Otay Ranch Subarea of the City of Chula Vista's East Planning Area.

The Otay Ranch Subarea is bounded on the west by I-805; on the north by SR-54 and the Sweetwater River Valley; on the northeast and east by Highway 94, within unincorporated San Diego County, near the communities of Jamul and Dulzura in the San Miguel Mountain/Proctor Valley area; and on the south within and adjacent to the boundaries designated by the General Development Plan of the Otay Ranch Master Planned Community. The area is mostly comprised of master planned communities in various stages of development and open space. A significant portion of the open space lands within the East Planning Area are outside of the designated villages, planning subareas, or other areas intended for development, and are to be preserved under the Otay Ranch Resource Management Plan and the MSCP Plan.

The City's adopted General Plan Update (2005) identifies four districts within the Otay Ranch Subarea of the East Plan Area: Western District, Central District, Eastern University District, and Otay Valley District. The Otay Valley Quarry Reclamation Plan Amendment project is located within the Central District. This district is generally located east of Wolf Canyon, west of SR-125, north of the Otay River, and south of Birch Road. A mix of land uses is anticipated to develop within the East Plan Area, including residential, commercial, and open space.

Section 4.1, *Land Use, Planning, and Zoning*, provides a detailed discussion of land use and zoning affecting the proposed project.

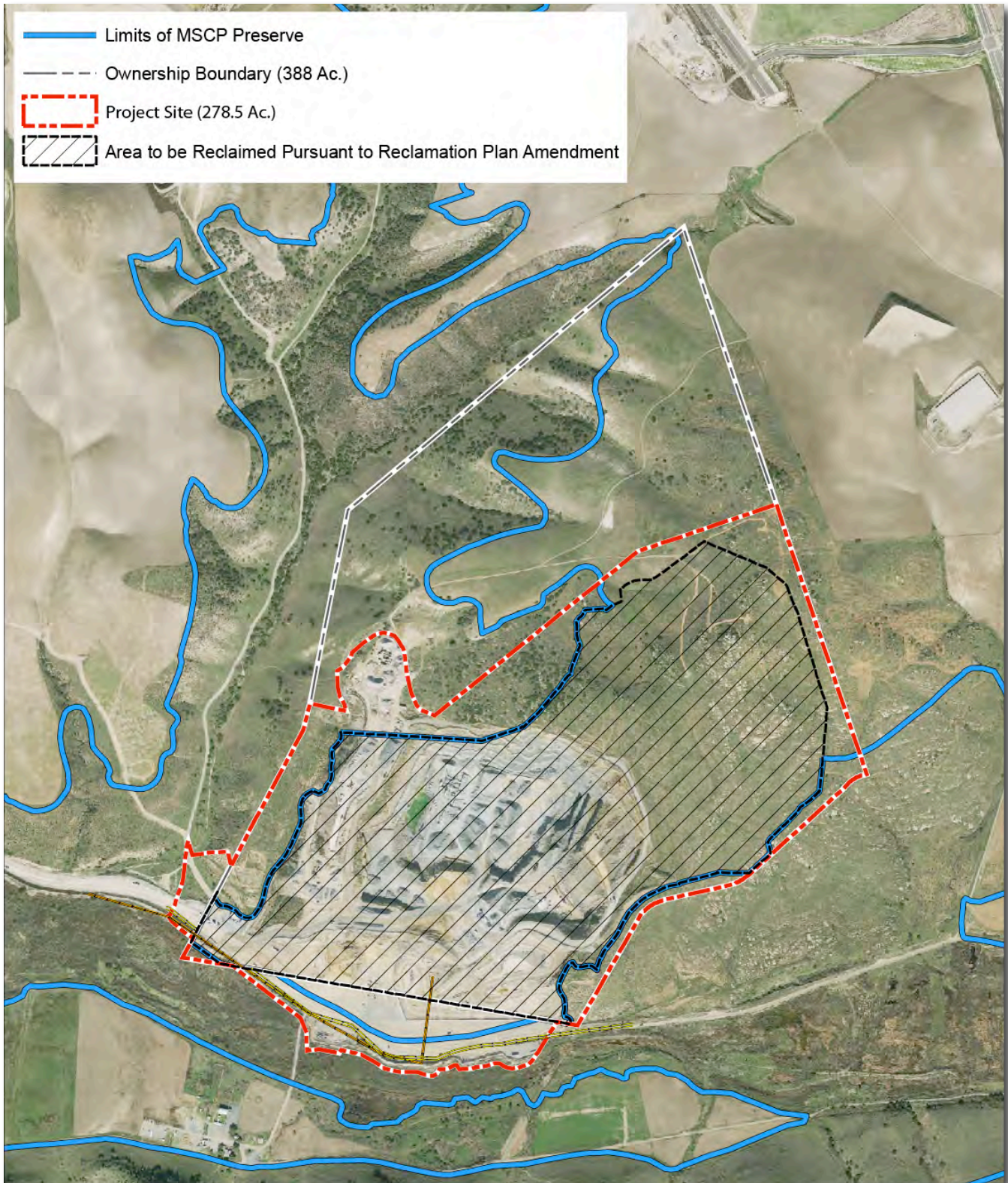
#### 2.4.2 Zoning

Zoning for the Project Site is regulated by Title 19 of the City's Municipal Code. The Otay Valley Quarry Reclamation Plan Amendment Project Site is zoned "P-C Planned Community". A number of uses are allowed in the P-C Zone, including open space, residential, commercial, and light industrial.

### 2.5 MULTIPLE SPECIES CONSERVATION PROGRAM (MSCP)

The MSCP is a long-term habitat conservation planning program authorized under Federal and State law that addresses multiple habitat species needs and the preservation of native vegetation communities for an approximately 900-square-mile area within San Diego County. It is one of three subregional habitat planning efforts in San Diego County which will preserve a network of habitat and open space, protect biodiversity, and enhance the region's quality of life. The MSCP addresses the potential impacts of urban growth, natural habitat loss, and species endangerment for 12 jurisdictions, including Chula Vista, and identifies a mitigation plan. Both public and private lands within the MSCP area must comply with the MSCP. The City of Chula Vista adopted the Chula Vista MSCP Subarea Plan in May 2003 in order to implement the MSCP as relevant to the City of Chula Vista. The Chula Vista MSCP Subarea Plan has been prepared pursuant to the general outline developed by the USFWS and the CDFG, and complies with the goals and requirements for habitat and species conservation.

The Project Site is located outside of the MSCP Preserve boundaries. A Boundary Adjustment to the MSCP Preserve has been approved for the Otay Valley Quarry and was the result of an issue that arose between the vested mining rights within the Ownership Boundary and the MSCP Subarea Plan's Preserve boundary that was approved subsequent to the establishment of the vested mining rights. The Boundary Adjustment resulted in a net gain to the Preserve of 17.1 acres and the removal of mining area from the MSCP Preserve. Figure 2-6, *Multiple Species Conservation Program Map*, shows the Project Site in relation to the City's MSCP. Reclamation activities, as described by the Otay Valley Quarry Reclamation Plan Amendment, would occur outside of areas designated as "Preserve" within the City's MSCP Subarea Plan pursuant to the Boundary Adjustment.



**Figure 2-6. Multiple Species Conservation Program Map**



### 2.6 OTAY VALLEY REGIONAL PARK (OVRP) CONCEPT PLAN

The Otay Valley Regional Park (OVRP) Concept Plan is the result of a multi-jurisdictional planning effort in the Otay River Valley by the County of San Diego and the cities of Chula Vista and San Diego. Much of the land within the Concept Plan is privately owned and has development potential based on existing zoning, land use plans, and other development regulations. The Concept Plan does not change existing zoning, and land use plans or add new development regulations. It does not preclude private development. It provides policy direction for the jurisdictions to coordinate land acquisition and development for the Regional Park, within the framework of private property rights.

The planning area for OVRP is located in the southern portion of San Diego County, four miles north of the United States/Mexico International Border. The Regional Park will extend about 11 miles from the southeastern edge of the salt ponds located southwest of the Project Site at the Pacific Ocean, through the Otay River Valley, to the land surrounding both Lower and Upper Otay Lakes located northwest of the Project Site. Environmental and urban conditions considered in preparing the Concept Plan were topography/landform, hydrology, biological resources, cultural resources, General and Community Plans, zoning and other regulations, and existing and planned land uses.

The MSCP and the US Fish and Wildlife Service San Diego National Wildlife Refuge are regional public planning efforts that include the Otay River Valley. In general, the goals of these programs are complementary, seeking to protect sensitive environmental resources in the region within a framework of private property rights. The Concept Plan has been prepared to complement those future plans. Similarly, those plans provide synergy for creation of the Regional Park.



## 3.0 PROJECT DESCRIPTION

### 3.1 LOCATION AND BOUNDARIES

This EIR analyzes the potential environmental impacts associated with implementation of the proposed Otay Valley Quarry Reclamation Plan Amendment project. The Otay Valley Quarry Reclamation Plan Amendment Project Site is located in southwest San Diego County, California, in the City of Chula Vista (see Figure 2-2, *Project Location Map*). The site sits two miles east of I-805. A private road provides access to the site from Heritage Road/Wiley Road.

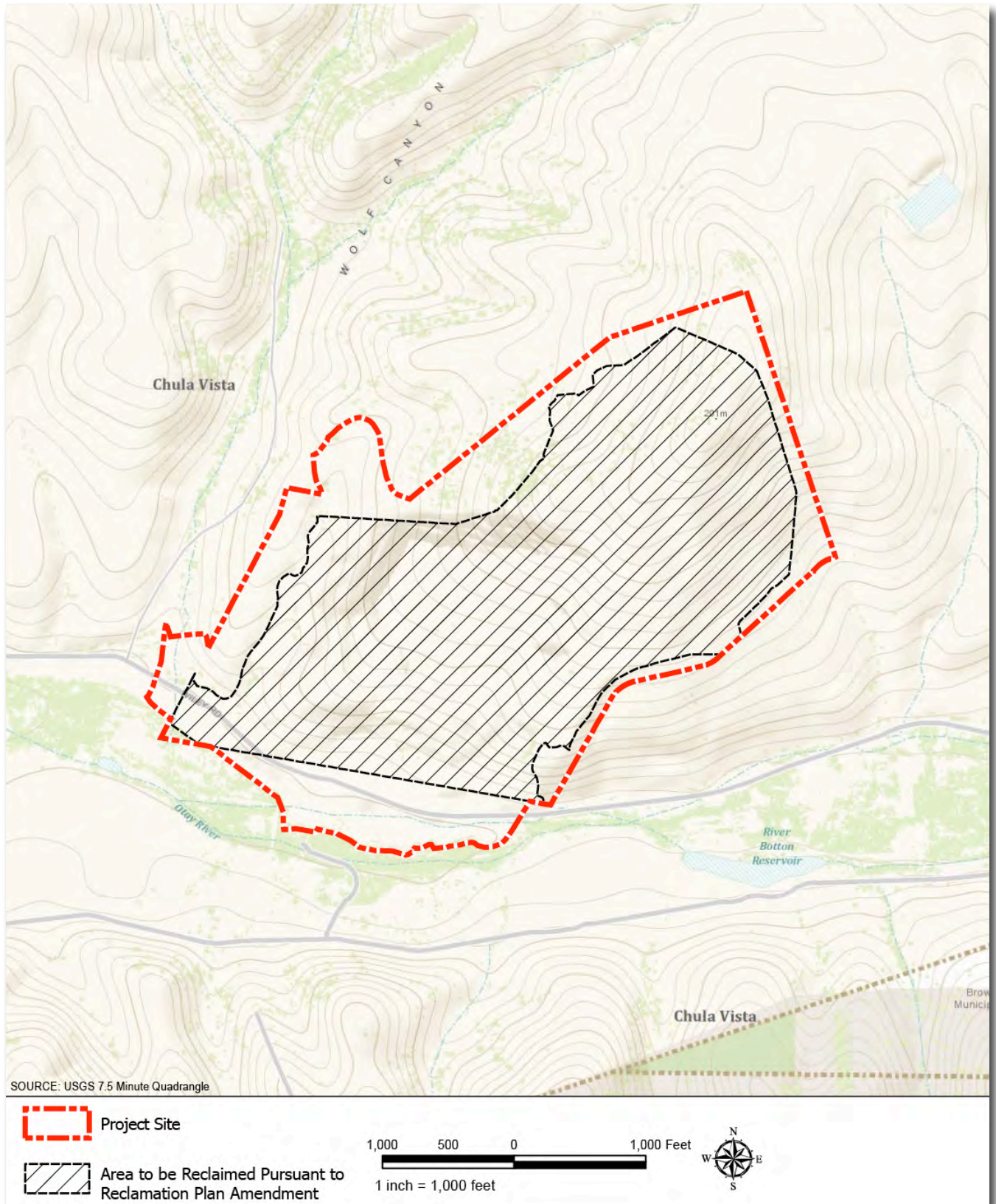
The proposed Reclamation Plan Amendment would occur when on-going vested mining rights cease at the Otay Valley Quarry (around the year 2089). The ownership boundary for the Otay Ranch Pit encompasses approximately 388 acres. The Otay Valley Quarry boundary encompasses approximately 278 acres of the 388-acre ownership boundary, on portions of Assessor's Parcel Numbers 644-060-06, 644-060-16, and 644-060-18. The Project Site which encompasses 278 acres within Otay Valley Quarry is located within Section 34, Township 18S, Range 2W, and Section 37, Township 18S, Range 3W, San Bernardino Baseline and Meridian (see Figure 3-1, *Site Location – USGS Map*).

Resource extraction pursuant to vested mining rights will continue on the Project Site. Reclamation activities proposed by the Otay Valley Quarry Reclamation Plan Amendment would occur on the approximately 197 acres within the 278-acre Project Site undergoing mining. Figure 2-4, *Existing Conditions - Otay Valley Quarry*, depicts the greater 388-acre Ownership Boundary, the 278-acre Project Site, and 197-acre area of the site where actual mining disturbance has occurred or will occur as part of the vested mining right and which would be reclaimed pursuant to the proposed Reclamation Plan Amendment. This EIR addresses potential environmental impacts associated with implementing the proposed Otay Valley Reclamation Plan Amendment on the 197-acre area within the 278-acre Project Site.

### 3.2 PROJECT HISTORY AND BACKGROUND

#### 3.2.1 History and Mining Authority

The Otay Valley Quarry is located in an area known as the Otay Ranch, which was a part of unincorporated San Diego County (the County) until 1997, when the City of Chula Vista annexed the property. Mining at the Otay Ranch began as early as 1923 in the Otay River Valley. Stephen Birch, an astute business and mining man who controlled a major share of the world's copper supplies in the early 1900s, purchased the Otay Ranch in 1936. Under Birch's control, alluvial sand and gravel continued to be mined from the Otay Ranch and by 1946, a reserve study revealed that approximately 84 percent of that material was depleted. Amidst declining supplies of alluvial sand and gravel deposits, the Otay Ranch turned to hard rock quarrying. Being the closest source of quarry material to the coast and its urban environment, Rock Mountain provided, and still provides, a valuable mineral resource. Over the next 20 years, the Rock Mountain reserve was quarried, serving post-World War II projects including intensive development of the military and commercial harbor facilities throughout the Port of San Diego.



**Figure 3-1. Site Location – USGS Map**



According to SMARA and the related 1978 San Diego County SMARA ordinance, an operating mine that was active prior to SMARA's enactment in January 1, 1976, has a vested right to mine. As such, the Otay Valley Quarry has a vested right to mine. The vested right is acquired by virtue of the mine being a nonconforming operation at the time of SMARA's enactment and the fact that mining was intended to extend into the Rock Mountain reserve prior to that use becoming nonconforming. Under SMARA, a vested right can be acquired even if no permit exists, if mining was a nonconforming use prior to SMARA's enactment. The vested right can be expanded if the intent to expand existed at the time the use became nonconforming. The former owners of the Otay Ranch commenced mining operations at the site in 1948, approximately eight years before the County enacted zoning code Section 480, which required a permit for quarries.

The County of San Diego approved a grading plan in 1973 that included plans to mine Rock Mountain. The County recognized the vested right to mine Rock Mountain at that time, including the areas over which mining is occurring and will occur, as well as the area where reclamation activities are proposed as part of the Otay Valley Quarry Reclamation Plan Amendment. The vested right to mine the site was reconfirmed by the Chula Vista City Council at a public hearing on December 16, 2008. (See *City of Chula Vista Resolution – Reconfirmation of Vested Rights* included as Appendix M to this EIR.)

### 3.2.2 Reclamation Plan Approvals

The original Reclamation Plan for the Otay Ranch mining operations (Otay Ranch Pit Reclamation Plan, California Mine ID# 91-37-0035) was approved in 1979 by San Diego County and covered a portion of the site. An amendment to the original Reclamation Plan was approved by the State Mining & Geology Board on June 13, 2006.

The proposed Otay Valley Quarry Reclamation Plan Amendment amends the Otay Ranch Pit Reclamation Plan by calling out the existing quarry site for reclamation under its own reclamation plan (the proposed project). Portions of the property within the Project Site have initiated reclamation activities pursuant to the Otay Ranch Pit Reclamation Plan Amendment (see Figure 2-5, *Existing Conditions – Substantially Initiated Parcels*). These areas are identified as the "North Parcel," "West Parcel," and "South Parcel." The West Parcel (7.02 acres) has already been reclaimed in accordance with the Otay Ranch Pit Reclamation Plan Amendment. The South Parcel (21.86 acres) has substantially initiated reclamation activities and shall remain subject to the requirements and success criteria established in the Otay Ranch Pit Reclamation Plan Amendment.

The North Parcel (10.4 acres) has substantially initiated reclamation activities, and future reclamation and revegetation of this parcel will comply with the Otay Ranch Pit Reclamation Plan Amendment, as well as additional requirements of the Otay Quarry MSCP Boundary Adjustment (Chula Vista Case Number PCM-10-14). (See Section 2.5 for a discussion of the approved MSCP Boundary Adjustment.) As a result of the MSCP Boundary Adjustment, the fill identified in the Otay Ranch Pit Reclamation Plan Amendment will no longer be placed on the North Parcel. More specifically, the 9.3-acre portion of the North Parcel subject to the MSCP Boundary Adjustment will be revegetated pursuant to the Boundary Adjustment document, while the portions of this parcel not covered under the Boundary Adjustment will be reclaimed and revegetated pursuant to the Otay Ranch Pit Reclamation Plan Amendment.

### **3.3 PROJECT PURPOSE AND OBJECTIVES**

The Otay Valley Quarry Reclamation Plan Amendment has been prepared by the project applicant in accordance with the requirements of SMARA found in PRC Section 2710 *et seq.*, Title 14 of the CCR Section 3500 *et seq.*, and the City of Chula Vista's (the lead agency) implementing ordinance. SMARA's Reclamation Plan requirements are found primarily in PRC Section 2772 and in CCR Section 3502. Minimum standards to be followed (CCR Section 3503) and reclamation performance standards (CCR Section 3700 *et seq.*), as applicable to the operation and its approved plan, must be met during operations and reclamation.

Based on SMARA, the proposed Reclamation Plan is intended to serve the following purposes:

- Provide the required contents for a Reclamation Plan as specified in PRC Section 2772 and CCR Section 3502;
- Serve as a reference manual for the mine operator to guide site reclamation consistent with the approved Reclamation Plan and to assist in regulatory compliance for operational activities; and
- Serve as a compliance document for the City of Chula Vista in monitoring ongoing compliance with the reclamation plan, as approved.

As presented in the proposed Reclamation Plan Amendment and pursuant to CCR Section 3502(h)(1), the Reclamation Plan Amendment functions as an amendment to the Otay Ranch Pit Reclamation Plan Amendment approved by the State Mining and Geology Board on June 13, 2006, for the mining of a new surface area that is consistent with a vested mining rights determination made by the City of Chula Vista. The Reclamation Plan Amendment is intended to supersede provisions and requirements of all previous reclamation plans and amendments with respect to the Project Site.

The Otay Valley Quarry Reclamation Plan Amendment is proposed to supersede provisions and requirements of all previous reclamation plans and amendments with respect to the Project Site as shown in Figure 3-1, *Site Location – USGS Map*. As indicated in Section 3.2.2 of this EIR, certain portions of the Quarry Boundary are subject to provisions of the current Otay Ranch Pit Reclamation Plan Amendment. Specifically, these portions are known as the “North Parcel,” the “West Parcel,” and the “South Parcel;” the location of these parcels is illustrated in Figure 2-5 of this EIR. The North Parcel (10.4 acres) has substantially initiated reclamation activities, and future reclamation and revegetation of this parcel would comply with the Otay Ranch Pit Reclamation Plan Amendment, as well as additional requirements of the Otay Quarry MSCP Boundary Adjustment (Chula Vista Case Number PCM-10-14); however, the fill identified in the Otay Ranch Pit Reclamation Plan Amendment would no longer be placed on the North Parcel. More specifically, the 9.3-acre portion of the North Parcel subject to the MSCP Boundary Adjustment will be revegetated pursuant to the Boundary Adjustment document, while the portions of this parcel not covered under the Boundary Adjustment will be reclaimed and revegetated pursuant to the Otay Ranch Pit Reclamation Plan Amendment. (For a discussion of the approved Boundary Adjustment, see Section 2.5, below.)

The proposed Otay Valley Quarry Reclamation Plan Amendment would be implemented at the Otay Valley Quarry when mining operations cease, which is estimated to be 2089. The Otay Valley Quarry is a hard rock quarry configured as an open pit, surrounded by stabilized land. Other than implementation of the

proposed Otay Valley Quarry Reclamation Plan Amendment, no other development is proposed as part of the project evaluated in this EIR.

Therefore, the Otay Valley Quarry Reclamation Plan Amendment project would accomplish the following basic objectives of SMARA:

- Provide for long-term stability of slopes;
- Prevent wind and water erosion by stabilizing the soil surface through proper grading and drainage; and
- Implement a revegetation program that is designed to establish self-sustaining native vegetation cover, until subsequent land development occurs.

The proposed Reclamation Plan Amendment lays out these objectives specifically to meet physical reclamation treatment objectives for disturbed land in a manner that adheres to the applicable SMARA statutes, as listed below:

- PRC Section 2712(a). Adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses.
- PRC Section 2712(b). The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment.
- PRC Section 2712(c). Residual hazards to the public health and safety are eliminated.

SMARA requires a description of the “proposed or potential uses” of a mined site after reclamation. Section 19.69.080.B.5 of the City of Chula Vista’s Zoning Code also requires that the Reclamation Plan “restore the mined lands to a useable condition that is readily adaptable for alternative land uses consistent with the general plan and multiple species conservation program.”

### 3.4 PROJECT CHARACTERISTICS

The proposed project evaluated in this EIR is a Reclamation Plan Amendment that would be implemented following completion of mining at the Otay Valley Quarry, anticipated to be about the year 2089. In order to understand how the Reclamation Plan Amendment would affect the topography existing at the time of its implementation, it is important to understand how the on-going mining operations will create the ultimate topography that will form the landform base for the Reclamation Plan Amendment. The reader is reminded that the current mining operations have vested rights, and approval of the Reclamation Plan Amendment does not affect these vested rights. Moreover, the continued mining operations do not require discretionary actions by the City. Therefore, this EIR does not address any aspects of the mining operations. This EIR does not address the specifics of how mining is accomplished, including types of equipment, quantity of material to be mined, etc., all of which is allowed to occur on the Project Site under the existing approved vested mining rights.

#### 3.4.1 Mining and Resultant Mined Topography

The proposed Otay Valley Quarry Reclamation Plan Amendment would be implemented at the Otay Valley Quarry, an open pit mine which will be actively mined until about 2089, at which time reclamation would begin. Mining at the site encompasses a mining operation eventually reaching approximately 197 acres of the 278-acre quarry. Actual active surface disturbance is kept to the minimum areas necessary for mining

and processing at any given time. Figure 3-2, *Mine Grading Plan*, shows the results of the active mining for the quarry. Figure 3-3, *Mining and Existing Surface Cross-Sections*, depicts the ultimate result of mining and its changes to the current landform, and the *Mine Phasing* is shown in Figure 3-4.

The current mining operation will ultimately excavate to depths that are below the local groundwater table, leaving a water feature at the end of mining and prior to reclamation. The quarry floor is planned for a maximum depth of approximately 300 feet below mean sea level, with a water surface anticipated at approximately 100 feet above mean sea level. The quarry high walls will be cut at a grade not to exceed 1:1 for a stable slope condition, except in the areas where benching will be eliminated to create sheer slopes. (See Figure 3-5, *Quarry Excavation Cut Slope Components and Dimensions*.) Final grading will be completed in such a manner that the slopes will convey the majority of all stormwater to the quarry.

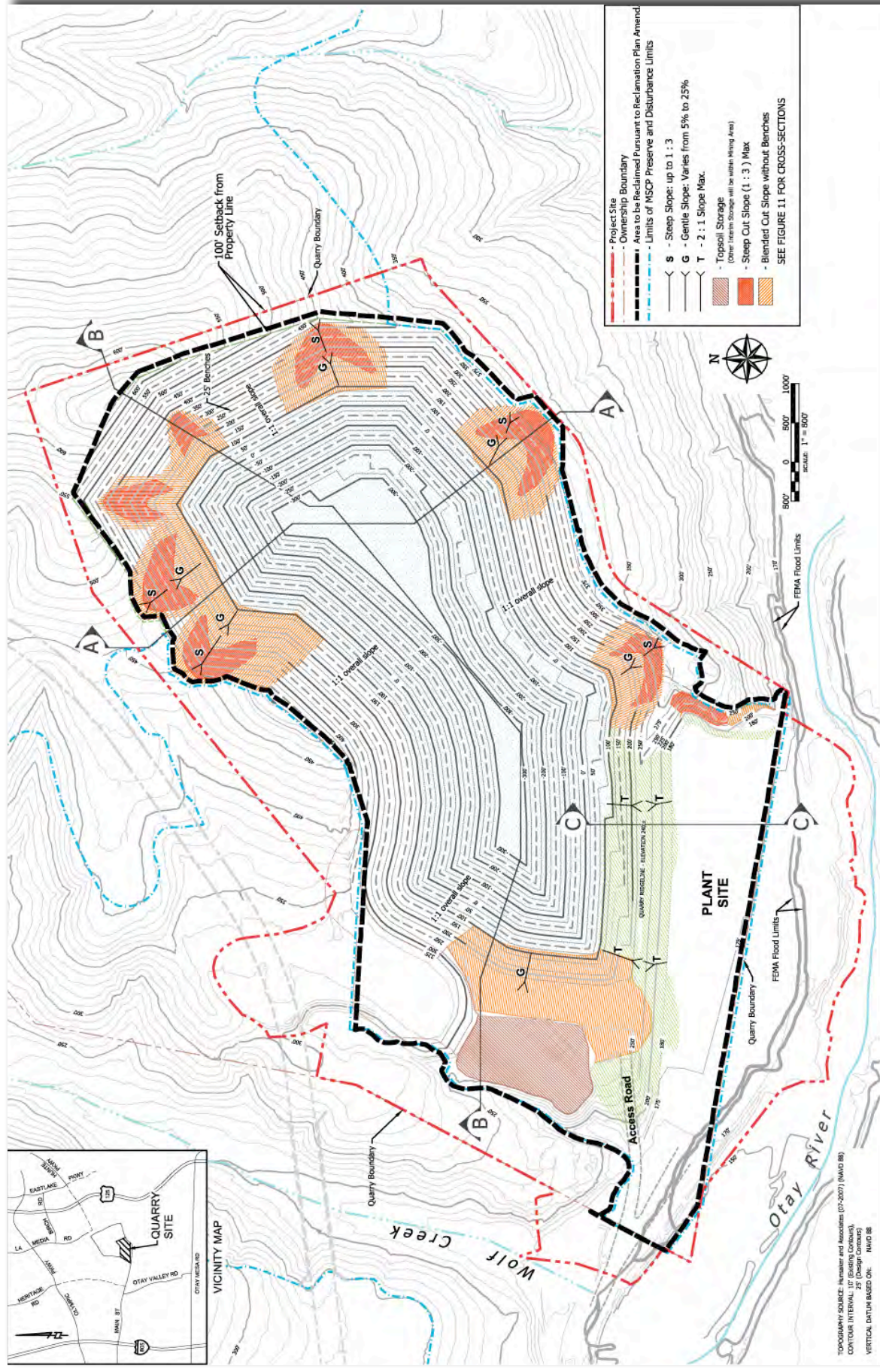
### 3.5 PROPOSED RECLAMATION PLAN AMENDMENT

#### 3.5.1 Overview

The topography of the completed mining site will reflect a typical hard rock quarry configured as an open pit. Final phases of mining will eliminate some of the horizontal benches typical with hard rock mining and create areas of sheer slopes to better conform to surrounding native topography. This will allow implementation of the grading associated with the proposed Reclamation Plan Amendment, as shown in Figure 3-6, *Proposed Reclamation Plan Amendment Grading Plan*. Mined surfaces would be leveled and stabilized for erosion control. Cut surfaces would be completed to slope grades to ensure long-term stability. Figure 3-7, *Mine Reclamation Surface Cross-Sections*, provides cross-sectional representation of mine slopes following grading proposed as part of the Reclamation Plan Amendment. Sediment basins and fines storage areas would be dewatered and revegetated with plant species suitable for erosion control. Grading would be completed in such a manner as to ensure proper surface drainage. Recoverable topsoil would be stockpiled for use on benches and quarry floor areas to be revegetated. The soil would be placed to enhance revegetation as surfaces are completed. Active revegetation, as proposed by the Reclamation Plan Amendment, would occur along the quarry's edges and outward-facing slopes, the larger lake benches, and the relatively level areas near the west and south boundaries. Vegetation species mixes, as described below, are site-specific and chosen with the intent of stabilizing areas of fill and blending with the adjacent vegetation. The success of revegetation would be monitored after completion of final reclamation to ensure successful erosion control. Figure 3-8, *Conceptual Illustrative Rendering*, provides an illustration of the Project Site when reclamation has been completed and fully established.



### 3.0 PROJECT DESCRIPTION



### Figure 3-2. Mine Grading Plan



# 3.0 PROJECT DESCRIPTION

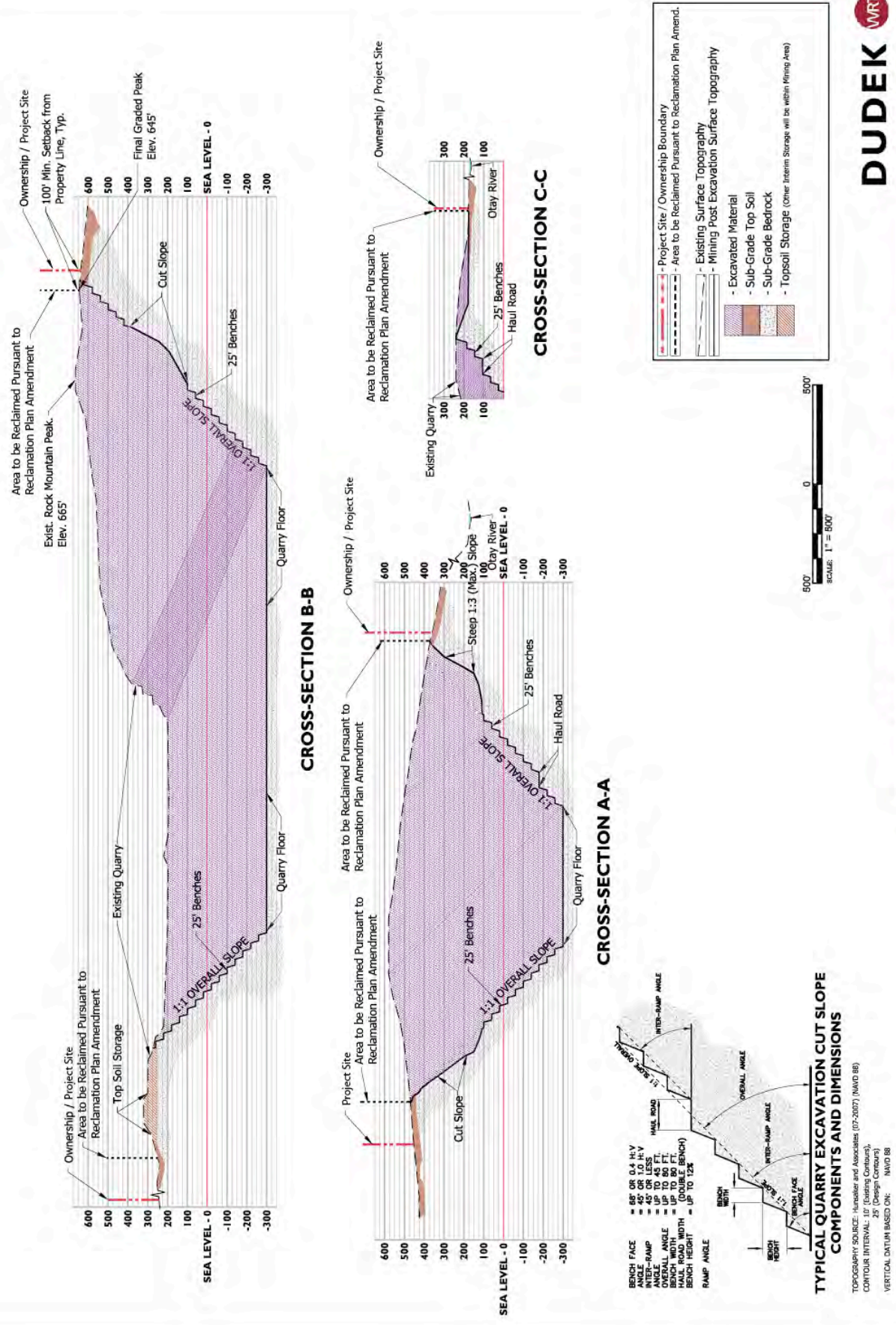


Figure 3-3. Mining and Existing Surface Cross-Sections

### 3.0 PROJECT DESCRIPTION

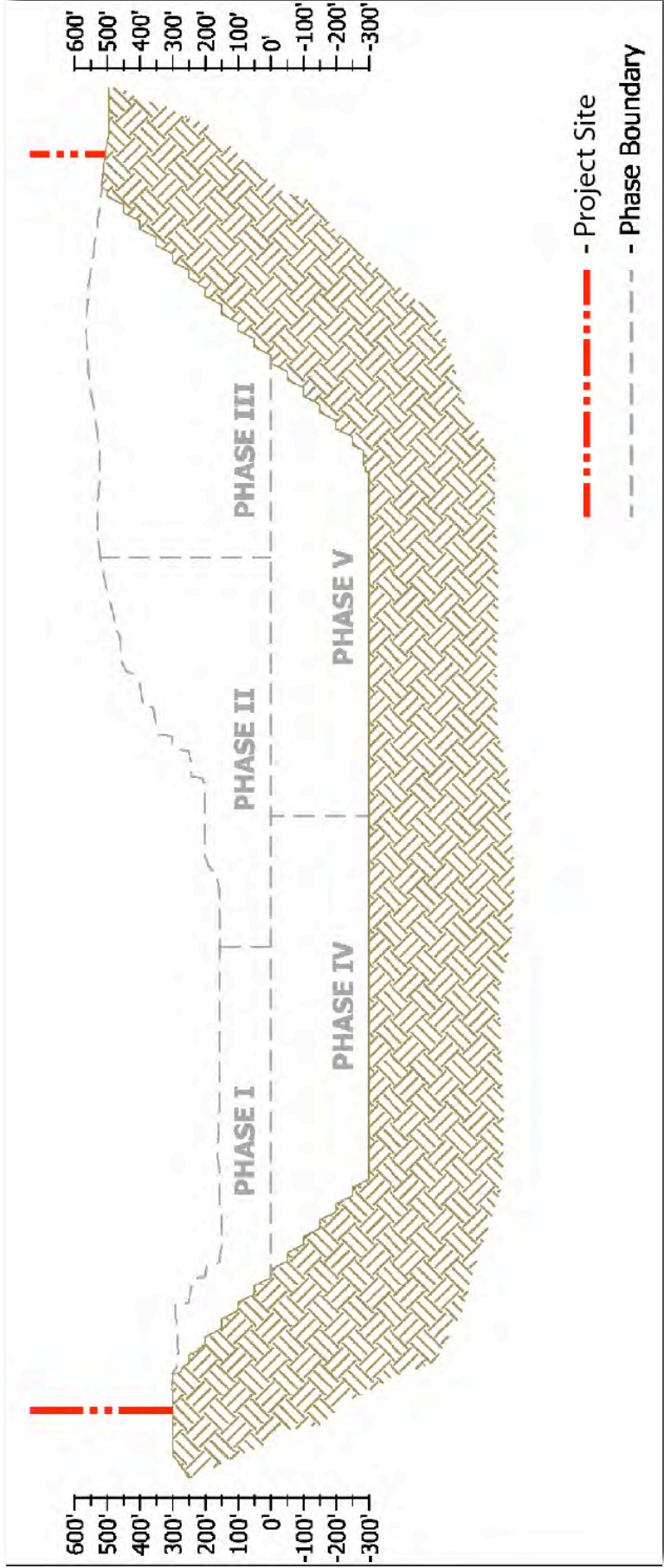
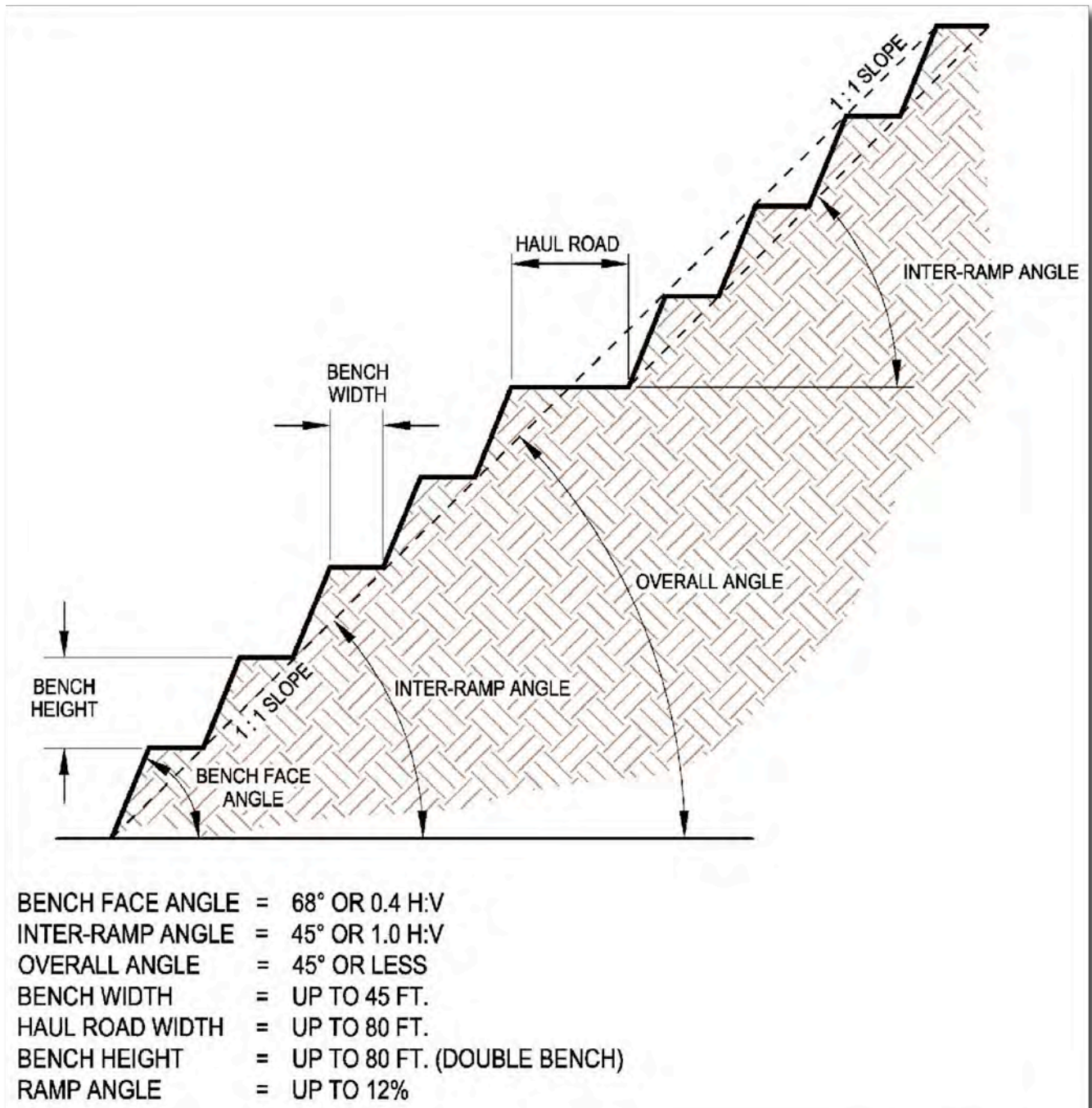


Figure 3-4. Mine Phasing

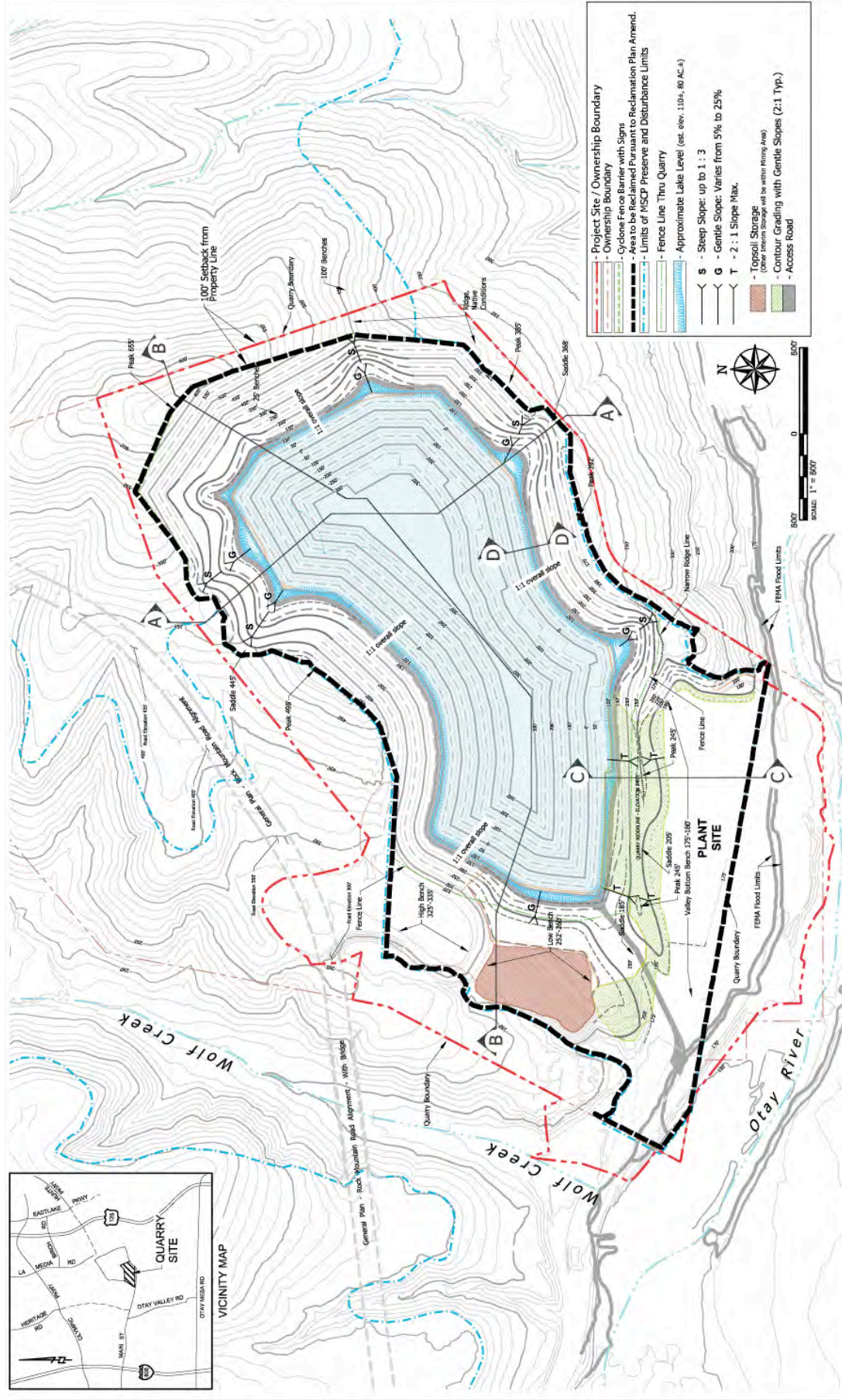




**Figure 3-5. Quarry Excavation Cut Slope Components and Dimensions**



### 3.0 PROJECT DESCRIPTION



### Figure 3-6. Proposed Reclamation Plan Amendment Grading Plan



# 3.0 PROJECT DESCRIPTION

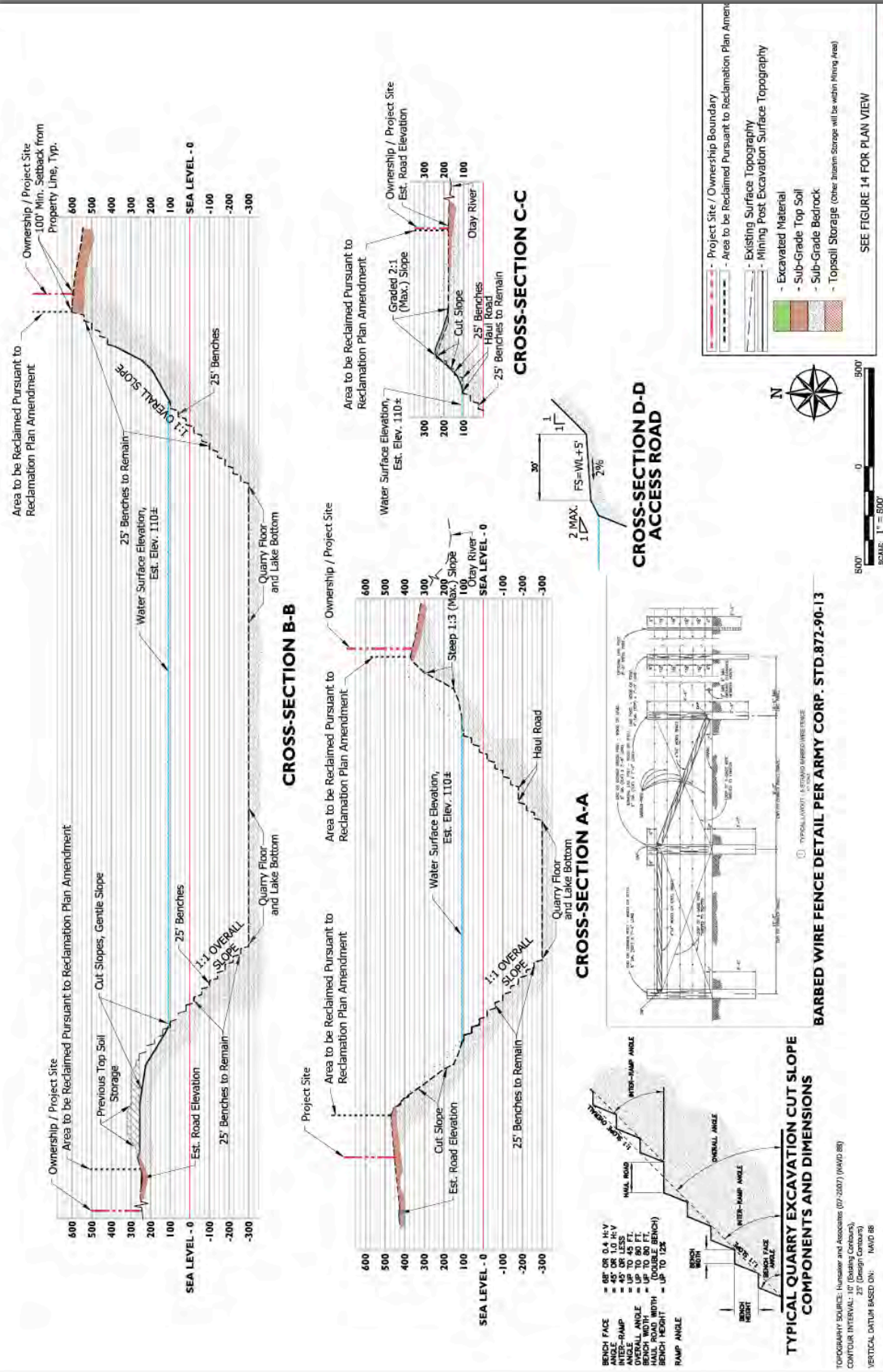


Figure 3-7. Mine Reclamation Surface Cross-Sections



Figure 3-8. Conceptual Illustrative Rendering

### **3.5.2 Topographic Condition and Surface Treatment**

Otay Valley Quarry, when mined to the full depth, will primarily be a depression with high sidewalls and a central reservoir. The sidewalls of the mined quarry comprise the native Santiago Peak volcanic material which would be graded in various configurations – stepped benches, steep faces, “rounded contours,” and several peak-saddle-peak formations – as part of the proposed Reclamation Plan Amendment. This variation in topographic configuration would reduce the highly uniform and engineered appearance of the sidewalls, reduce the angled edges at the reservoir line, and help integrate the quarry edges with adjacent land. The reclaimed sidewalls (internal) would range in grade from 1:1 to nearly vertical. Above the natural water line, areas of fill have been proposed to vary the topographic profile, restoring it to a more natural configuration (peak-saddle-peak) as was evident prior to mining. The outward-facing fill slopes would vary in grade from approximately 2:1 to 8:1, much like the surrounding topography, and present an undulating character along the southernmost edge nearest the Otay River. The benches have been reconfigured to mimic the natural contours of the river valley edge.

The reclaimed quarry’s central depression would fill with water naturally and have a water surface elevation equalized with the local groundwater table at approximately 85 to 127 feet above mean sea level (AMSL). Final grading would be completed in a manner such that the slopes would convey the majority of all developmental stormwater in drainage to the quarry.

Active revegetation would occur along the quarry’s edges and outward-facing slopes, the larger lake benches, and the relatively level areas near the west and south boundaries. The revegetation is intended to stabilize areas of fill and blend with the adjacent vegetation. Vegetation species mixes are tailored to their specific site location with the riparian species nearest the Otay River, and mixed coastal sage scrub/grassland at higher elevations, where these plants grow among the abundant Santiago Peak volcanic outcrops of Rock Mountain. In addition, revegetation would visually screen parts of the quarry and add foreground interest when viewing the quarry from the two western benches at higher elevations. During the extended period of mineral extraction, the natural process of revegetation in some areas will have already commenced. The stepped volcanic benches remaining within the quarry would not be actively revegetated, as this would not be necessary for stabilization and would accentuate the engineered faces of the quarry.

### **3.5.3 Backfilling, Regrading, Slope Stability, and Recontouring**

The proposed Otay Valley Quarry Reclamation Plan Amendment establishes specific criteria and actions to properly backfill, regrade, and ensure slope stability and proper recontouring of the site. The specific actions listed in the plan support three goals: manage stockpiles to facilitate phased reclamation; fill slopes, stability and conformity with surrounding topography or end use; and cut slope stability. (The creation of stockpiles only occurs during active mining; during reclamation, stockpiles are managed, as necessary.)

### 3.5.4 Revegetation

The proposed Otay Valley Quarry Reclamation Plan Amendment establishes guidelines for the revegetation of the site, through the use of soil analysis, test plots, site preparation and reclamation of internal roads, species, planting densities and schedule, weed abatement, and soil stabilizing practices. Additionally, the project includes enlarged “amenity planting” areas just outside the northeast and southeast limits that would be enhanced with additional container stock to expedite large shrub/small tree coverage along those edges. Landscape and irrigation plans shall be prepared by a licensed landscape architect and approved by the City. Plant species to be used in revegetation are common to the site and surrounding area; many have naturally revegetated without assistance. Active resoiling would occur as revegetation areas are completed. A locally supplied seed mix with success guaranteed by the supplier would be used. Test plots would be used to confirm the recommended application rate and specific mix. Species to be planted (see Tables 3-1 through 3-6, below) would consist of commercially available erosion control and native plants that have evidenced good success on disturbed soils, and are consistent with vegetation used in the region for this purpose.

The proposed Reclamation Plan Amendment includes revegetation with plant species that are commercially available for erosion control, native plants that have evidenced good success on disturbed soils, and plant species that are consistent with vegetation used in the region for this purpose. Tables 3-1 through 3-6 display the proposed revegetation seed and container plant (“amenity”) palettes for the various revegetation areas from which species would be selected. The tables below indicate the approximate seed rates, planting densities, and composition.

**Table 3-1. Seed Mix for Quarry Uplands/Perimeter Fill Area**

Plant Species	Common Name	Comments	Application Rate (lbs./acre)
<i>Lupinus nanus</i>	Sky lupine	Annual native legume wildflower	3
<i>Artemisia californica</i>	California sagebrush	Perennial shrub, deep roots, adapted to drought and rocky sites	3
<i>Baccharis pilularis</i>	Coyote Bush	Perennial shrub, deep root system, adapted to sand and rocky sites-self seeding	1
<i>Ilienandra fasciculata</i>	Tarplant	Annual herb, adapted to poor soil, rocky sites	2
<i>Encelia californica</i>	Bush sunflower	Perennial shrub, lower foothill species, adapted to rocky sites	2
<i>Eriodictyon crassifolium</i>	Thick-leaf Yerba Santa	Perennial shrub, lower foothill species, adapted to rocky sites	3
<i>Eriogonum fasciculatum</i>	California buckwheat	Perennial shrub, lower foothill species, adapted to rocky sites	5
<i>Eriophyllum confertiflorum</i>	Golden yarrow	Lower foothill wildflower species, adapted to rocky sites	3
<i>Eschscholzia californica</i>	California poppy	Fast germinating wildflower-erosion control	7

Plant Species	Common Name	Comments	Application Rate (lbs./acre)
<i>Isocoma menzezii</i>	Goldenbush	Perennial shrub, lower foothill species, adapted to rocky sites-self seeding	1
<i>Lasthenia californica</i>	Goldfields	Lower foothill wildflower species, adapted to rocky sites	1
<i>Lotus scoparius</i>	Deerweed	Fast growing subshrub, adapted to rocky sites-nitrogen fixing, erosion control	3
<i>Lupinus bicolor</i>	Miniature Lupine	Native legume wildflower	2
<i>Viguiera lacinata</i>	San Diego Sunflower	Perennial shrub, drought tolerant, adapted for rock sites	3
<i>Nasella pulchra</i>	Purple needlegrass	Native drought tolerant bunchgrass	1
<i>Salvia apiana</i>	White sage	Perennial shrub, drought tolerant, adapted to rocky sites	3
<i>Vulpia microstachys</i>	Small fescue	Native drought tolerant grass-erosion control	5
<i>Bromus carinatus</i>	California brome	Native uplands grass species- erosion control	5
<i>Leymus triticoides</i>	Creeping wild rye	Native spreading grass - tolerates saline soil	3
Hydromulch		Virgin wood fiber mulch	Manufacturer's rate
Tackifier		Apply with hydromulch and seed	Manufacturer's rate
Coarse mulch (chipped slash, straw free of dry-site weeds)		To be dry-blown onto surface after seeding	To be determined based upon material

**Notes:**

- 1 Straw will be tacked in place with hydraulically applied tackifier, per manufacturer's recommended rate.
- 2 These plants provide the range of species that may be used; not all seed may be available at all times, and each acre of land reclaimed would not require all species.
- 3 Seed mix list was developed specifically to address compatibility with the adjacent MSCP Preserve Areas and the list was prepared under the direction of a qualified biologist.

**Table 3-2. Container Plant Palette for Upper Quarry Perimeter Screening/Visual Buffer**

Plant Species	Common Name	Comments	Size	Spacing
<i>Ceanothus tomentosus</i>	Woollyleaf ceanothus	Native shrub to 12'	1 gallon	8'
<i>Cercocarpus minutiflorus</i>	San Diego Mountain Mahogany	Native small tree to 15'	1 gallon	6'
<i>Heteromeles arbutifolia</i>	Toyon	Native shrub to 15'	5 gallon	10'
<i>Malosma laurina</i>	Laurel sumac	Native shrub to 15'	1/5 gallon	10'
<i>Quercus agrifolia</i>	Coast live oak	Native tree to 40' slow	5 gallon	25'
<i>Quercus berberidifolia</i>	Scrub oak	Native shrub to 10'	1 gallon	8'



Plant Species	Common Name	Comments	Size	Spacing
<i>Rhus integrifolia</i>	Lemonadeberry	Native shrub to 15'	1/5 gallon	10'

**Notes:**

1. These plants provide the range of species that may be used for screening/buffer purposes, not all species will necessarily be used.
2. Container plants typically need supplemental water to become established.

**Table 3-3. Seed Mix for Lake Benches/Wetlands**

Plant Species	Common Name	Comments	Application Rate (lbs./acre)
<i>Ambrosia pislasyachya</i>	Western ragweed	Drought tolerant-perennial -low growing herb	2
<i>Artemisia californica</i>	California sagebrush	Native shrub, drought tolerant	3
<i>Artemisia douglasiana</i>	Douglas' mugwort	Perennial wetland subshrub	5
<i>Artemisia palmerii</i>	Palmer's sagewort Bush	Perennial shrub, adapted to wetland sites-drought tolerant	3
<i>Baccharis pilularis</i>	Coyote Bush	Native shrub, drought tolerant, deep root system, self seeding	1
<i>Distichlis spicata</i>	Salt grass	Perennial low-growing wetland-marsh grass-salt tolerant	5
<i>Eriophyllum confertiflorum</i>	Golden yarrow	Lower foothill wildflower species	3
<i>Hordeum intercedens</i>	Little barley	Annual wetland grass	3
<i>Iva hayesiana</i>	San Diego marsh elder	Perennial subshrub, tolerates saline soils dry to saturated sites	5
<i>Juncus acutus</i>	Spiny rush	Riparian-wetland-marsh plant-salt tolerant	1
<i>Leymus triticoides</i>	Creeping wildrye	Perennial rhizomateous grass-tolerates saline soil	5
<i>Lupinus bicolor</i>	Miniature Lupine	Native legume wildflower	2
<i>Lupinus succulentus</i>	Arroyo lupine	Annual native legume wildflower	3
<i>Oenothera elata</i> spp. <i>Hookeri</i>	Evening primrose	Fast germinating annual wetland species	0.5
<i>Viguiera lacinata</i>	San Diego Sunflower	Perennial shrub, drought tolerant	3
Hydromulch		Virgin wood fiber mulch	Manufacturer's rate
Tackifier		Apply with hydromulch and seed	Manufacturer's rate

**Notes:**

1. These plants provide the range of species that may be used; not all seed may be available at all times, and each acre of land reclaimed would not require all species.
2. Mix includes several species that are relatively drought-tolerant, to provide a more flexible palette in terms of water availability.

Table 3-4. Container Plant Palette for Lake Benches/Wetlands

Plant Species	Common Name	Comments	Size	Qty/Acre
<i>Atriplex canescens</i>	Four wing salt brush	Deep rooted perennial shrub	1 gallon	30
<i>Isomeris arborea</i>	Bladderpod	Perennial shrub-drought tolerant	1 gallon	30
<i>Populus fremontii</i>	Fremont's cottonwood	Riparian tree	1 gallon	50
<i>Quercus agrifolia</i>	Coast Live oak	Alluvial-riparian tree-deep root system	5 gallon	50
<i>Salix exigua</i>	Sand bar willow	Riparian tree-semi-drought tolerant	1 gallon	30
<i>Sambucus mexicana</i>	Mexican elderberry	Riparian tree/large shrub-drought resistant	1 gallon	50
<i>Salix gooddingii</i>	Black willow	Riparian tree	1 gallon	20
<i>Salix lasiolepis</i>	Arroyo willow	Riparian tree	1 gallon	50
			TOTAL/AC	230

Table 3-5. Seed Mix for Valley Bottom Bench

Plant Species	Common Name	Comments	Application Rate (lbs./acre)
<i>Ambrosia psilostachya</i>	Western ragweed	Drought tolerant-perennial -low growing herb	2
<i>Artemisia douglasiana</i>	Douglas' mugwort	Perennial wetland subshrub	3
<i>Artemisia palmerii</i>	Palmer's sagewort Bush	Perennial shrub, adapted to wetland sites-drought tolerant	4
<i>Atemisia californica</i>	California sagebrush	Native shrub	3
<i>Eriogonum fasciculatum</i>	Flat-topped buckwheat	Perennial shrub-common to dry alluvial areas	5
<i>Eschscholzia californica</i>	California poppy	Annual native wildflower-erosion control	5
<i>Isocoma menziesii</i>	Goldenbush	Perennial shrub common to alluvial scrub areas	3
<i>Iva hayesiana</i>	San Diego marsh edler	Perennial subshrub tolerates saline soils dry to saturated sites	5
<i>Juncus acutus</i>	Spiny rush	Riparian-wetland-marsh plant-salt tolerant	1
<i>Leymus triticoides</i>	Creeping wildrye	Perennial rhizomateous grass-tolerates saline soil	5
Hydromulch		Virgin wood fiber mulch	Manufacturer's rate
Tackifier		Apply with hydromulch and seed	Manufacturer's rate

**Notes:**

1. These plants provide the range of species that may be used; not all seed may be available at all times, and each acre of land reclaimed would not require all species.



**Table 3-6. Container Plant Palette for Valley Bottom Bench**

Plant Species	Common Name	Comments	Size	Qty/Acre
<i>Atriplex canescens</i>	Four wind salt bush	Deep rooted perennial shrub	1 gallon	30
<i>Baccharis pilularis</i>	Coyote brush	Alluvial shrub species-recruits easily	1 gallon	30
<i>Isomeris arborea</i>	Bladderpod	Perennial shrub-drought tolerant	1 gallon	30
<i>Opuntia littoralis</i>	Prickly pear	Alluvial cacti	1 gallon	30
<i>Platanus racemosa</i>	California sycamore	Alluvial-riparian tree-deep root system	5 gallon	40
<i>Quercus agrifolia</i>	Coast Live oak	Alluvial-riparian tree-deep root system	5 gallon	50
<i>Sambucus mexicana</i>	Mexican elderberry	Alluvial tree/large shrub-drought resistant	1 gallon	40
			TOTAL/AC	250

In addition to seeding, the sensitive viewshed areas would be supplemented with container plantings as shown in Figure 3-9, *Amenity and Reclamation Planting Zones*. These zones use the container palettes listed in Tables 3-2, 3-4, and 3-6, which supplement hydroseed in the reclamation areas. General locations of hydroseed-only areas, by plant palette, are also shown in Figure 3-9. Planting density of container plants in the Amenity Planting Zones should vary and appear naturalistic, reflecting the character of the surrounding native vegetation.

Following completion of mining operations, overburden and top soil would be placed on benches and within the quarry bottom. Seeding and planting would then occur to revegetate the benches. Temporary access to the edge of the quarry bottom for revegetation efforts can occur along existing quarry benches, as fill of the quarry depression with water is not expected to reach equilibrium level for approximately ten years after the end of quarry operations. In general, non-irrigated revegetation areas would be seeded in either fall or winter to the extent practical for best germination results.

The quarry walls would be comprised of steep, mostly rock walls. Soil cannot be placed on the walls, due to geotechnical and safety constraints. The uplands and perimeter fill areas would generally be steep slopes comprised of compacted overburden and a 12-inch deep topsoil cap. The lower benches and quarry bottom may be used for stockpiling of overburden during the mining period; this material would be recovered or merely bulldozed over the side for use in reclamation of the quarry floor.

The rock comprising the benches and walls would be much more impervious to penetration of water and plant roots than even the present restrictive layers of highly weathered rock that underlie the existing soil profiles on the site. Therefore, the quarry walls would not be seeded or otherwise revegetated. The upland perimeter and fill areas would be better suited to revegetation due to the presence of the deeper soil. These areas would be seeded using species listed in Tables 3-1 and 3-2.

### 3.0 PROJECT DESCRIPTION

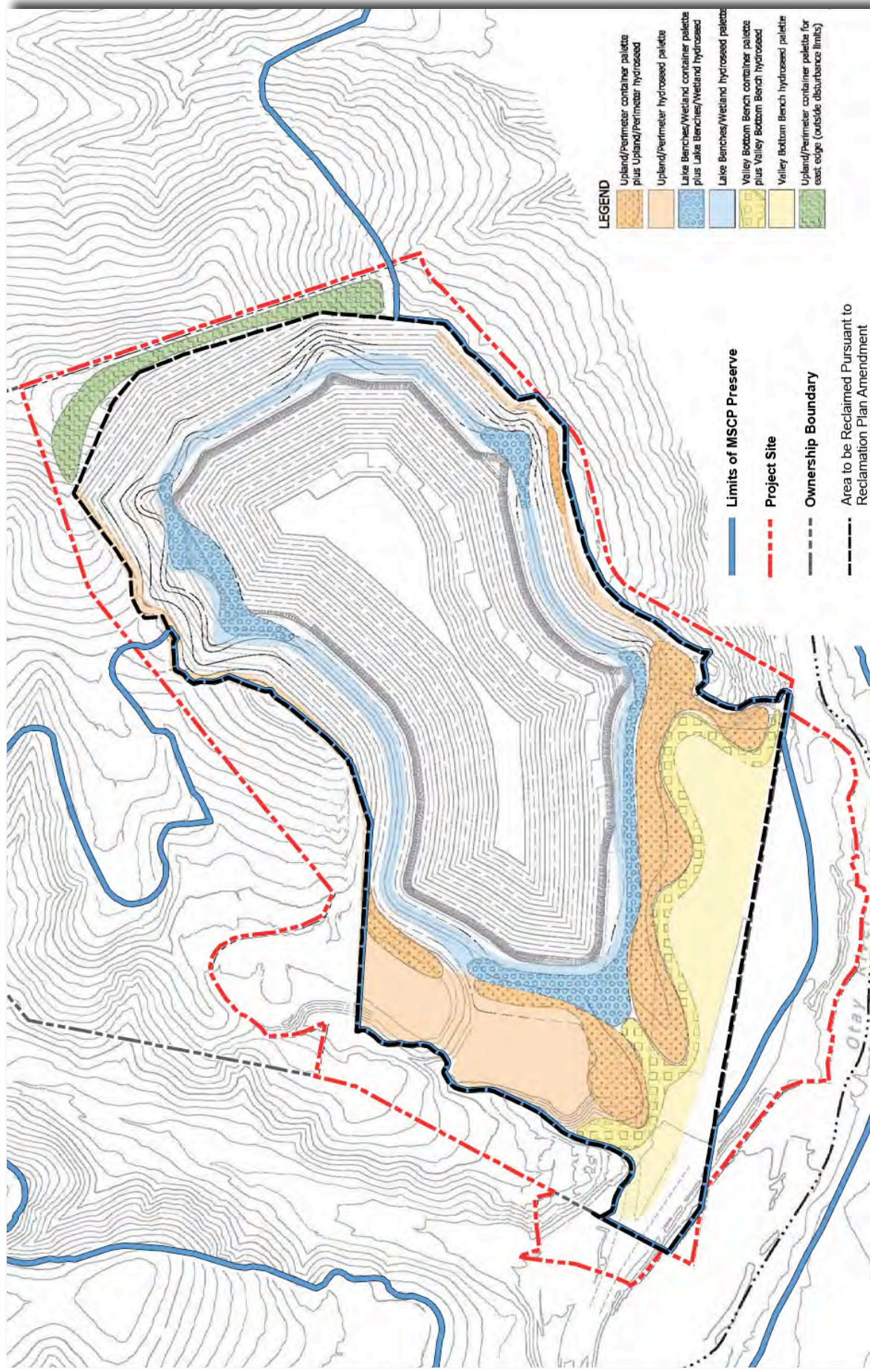


Figure 3-9. Amenity and Reclamation Planting Zones

Due to geotechnical and practical limitations on safe equipment operation in a high wall setting, soil would not be applied to either benches or walls within the Otay Valley Quarry. Additionally, it is not anticipated that irrigation would be required to support the native seed mixes. Container plants in the amenity planting zones may need supplemental irrigation for successful establishment (e.g., temporary automatic system, deep pipe delivery with manual watering, or other establishment methods developed in the future). The need for supplemental irrigation would be determined with the test plots.

The proposed Reclamation Plan Amendment includes separate success criteria for seeded areas and amenity planting zones. Success criteria for seeded areas consist of 25 percent vegetative cover by seeded species by the end of a 120-day plant establishment and warranty period, 40 percent cover by the end of year one, 50 percent by the end of year two, 60 percent by the end of year three, and 70 percent (or more) ultimate cover by seeded species. If these annual cover requirements are not met, re-seeding may be required as directed by the project biologist. These same criteria apply to seeded species in the amenity zones. In addition, the following success criteria apply to container plants in amenity zones during the five years after planting: 100 percent survival at end of year one, and 80 percent for the remaining four years. Dead container plants shall be tallied annually and replaced as required to meet the success criteria. Additional desired native species established through natural recruitment also may be counted toward the criteria.

Plant vitality and conformity with established success criteria would be monitored for a total of five years after the completion of the reclamation activities, or until success criteria have been met, whichever is longer. During the first two years monitoring and maintenance would occur on a monthly basis. After the second year, monitoring would occur every other month for three years or until success criteria are achieved, whichever occurs later. In order to meet revegetation standards, vegetation should be self-sustaining for at least the last year of the monitoring period.

For areas of revegetation, workers would evaluate the progress of revegetation, reseed any areas where vegetation has failed to establish, and would selectively apply herbicide to any areas with weeds. If plants do poorly because of substandard planting techniques, inferior planting stock, or drought, the same species would be replaced. If a species does poorly in spite of favorable stock, technique, and weather conditions, a qualified botanist or landscape architect would be consulted, and the plant species would be replaced with a more successful species within its plant association.

For erosion control areas, workers would also inspect the slopes and drainages for signs of significant erosion, and would implement erosion control measures, as appropriate. Workers would make any repairs to the irrigation system, if needed; perform erosion control work and fence repair; and remove sediment from ditches and ponds. At the end of the maintenance and monitoring period, if vegetation has properly established and sediment is no longer evident in site drainage, a closure report would be prepared and filed with the City of Chula Vista and the California Department of Conservation.

Workers would also inspect the slopes and drainages for signs of significant erosion and would implement erosion control measures, as appropriate. Workers would make any repairs to the irrigation system; if needed; perform erosion control work and fence repair; and remove sediment from ditches and ponds. At the end of the maintenance and monitoring period, or once success criteria has been met, whichever is longer, if vegetation has properly established and sediment is no longer evident in site drainage, a closure report would be prepared and filed with the City of Chula Vista and the California Department of Conservation.

Weed management is the most critical factor in native plant establishment, as competition from annual grasses and exotic forbs can be severe. In general, weed suppression is needed for at least two to three years for improved native plant establishment and growth. For this project, a monitoring and maintenance plan would be implemented to promote successful revegetation.

The project proposes the use of test plots to confirm the recommended application rates, container densities, and specific mixes. Test plots allow evaluation of the different plant palettes listed in Tables 3-1 through 3-6. Additionally, test plot locations are selected to represent significant microclimates in terms of slope, aspect, and elevation. Test plots would be designed such that no disturbance would occur for a minimum of five years after establishment and would be sufficiently large to quantify success criteria as outlined above.

Maintenance would primarily consist of removing weeds to facilitate establishment of desired vegetation. Maintenance personnel should be able to distinguish between desired plants and weeds. Weeding should occur once per month during the first year after planting, and then every three to four months during years two through four. If any revegetated areas would receive supplemental irrigation (as determined by test plots), irrigation-related maintenance may also be required, either to inspect and adjust automatic irrigation systems (if that technology is used), or to deliver water as needed to irrigated plants (if manual/deep pipe irrigation is used). If supplemental irrigation is used, it should extend for at least two years to ensure plant establishment.

Monitoring of test plots would be conducted annually by a qualified biologist, after most plant growth has ended (usually late summer). Monitoring consists of measuring percent survival and percent cover of desired species in revegetated areas, and comparing these data with established success criteria (summarized above) for seeded areas and container plants. The monitoring program would last a minimum of five years.

### **3.5.5 Drainage, Diversion Structures, Waterways, and Erosion Control**

The proposed Otay Valley Quarry Reclamation Plan Amendment establishes protocol for drainage, diversion structures, waterways, and erosion control at the Project Site, through the use of erosion and sedimentation and groundwater quality, recharge potential, and storage capacity. The specific conclusions and actions to support these goals are crucial in stabilizing the land and preparing for future development, and are as follows:

Reclamation operations employ the following erosion and sediment control measures (as necessary):

- Sedimentation basins
- Water truck usage and soil compaction via track walking
- Diversion of run-on and run-off through the use of temporary chevrons
- Silt fences, wattles, rock slope protection, or other sediment control devices

Preventative maintenance activities are performed as part of the Stormwater Pollution Prevention Plan (SWPPP) program and include the following:

- Cleaning of accumulated sediment, debris, and potential contaminants from the stormwater structural controls is conducted as needed before the start of the rainy season
- Clearing of debris from drain inlets and drainage pipes



Fuel or other chemicals present on the mine site will be handled and stored using appropriate containment to prevent accidental spillage into open water bodies. City-approved spill prevention and emergency response plans outlining guidelines and procedures for handling hazardous materials will be implemented.

### 3.6 RECLAMATION PHASING AND SCHEDULE

#### 3.6.1 Reclamation Plan Phasing

Phasing for implementation of the Reclamation Plan Amendment is shown in Figure 3-10, *Reclamation Phasing*. Phasing for the Reclamation Plan Amendment would involve interim-term phases and a long-term phase.

Intermediate-term phasing occurs in two forms. A portion of intermediate-term phasing could be reclaimed after the construction of Rock Mountain Road. This portion is depicted in yellow on Figure 3-10. The phase includes the northwest corner of the Project Site, located outside of the MSCP Preserve boundary. If Rock Mountain Road is not completed prior to the depletion of mineral resources, this intermediate-term phase will occur with the long-term phase, described below.

Intermediate-term phasing also includes a portion of the Project Site to be reclaimed after reaching the perimeter of the disturbance area. This area, depicted in blue of Figure 3-10, encompasses the bulk of the southern portion of the Project Site, the southern boundary, and the northern boundary, all located outside the MSCP Preserve boundary.

Long-term phasing (shown in green on Figure 3-10) includes the remainder of the reclamation area, to be reclaimed after mining operations cease. This phase includes the western portion of the Project Site, outside of the MSCP Preserve boundary. Also included in this phase is the internal periphery of the reclamation area.

#### 3.6.2 Implementation Schedule

The Otay Valley Quarry Reclamation Plan Amendment would occur in four scheduled stages. The first stage of reclamation would consist of the removal of all equipment and structures and would take approximately three weeks. The types of mobile equipment and/or machines to be removed from the site are typical excavation equipment, such as a dozer, front-end wheel loader, portable water pump, motor grader, conveyers, and haul trucks. A water truck is also on-site for maintenance of surfaces and dust control. This equipment would be removed, along with stationary structures such as the scale and administration building. This phase would require the use of several flatbed trucks, a crane, a 12-person crew, and two excavators.

### 3.0 PROJECT DESCRIPTION

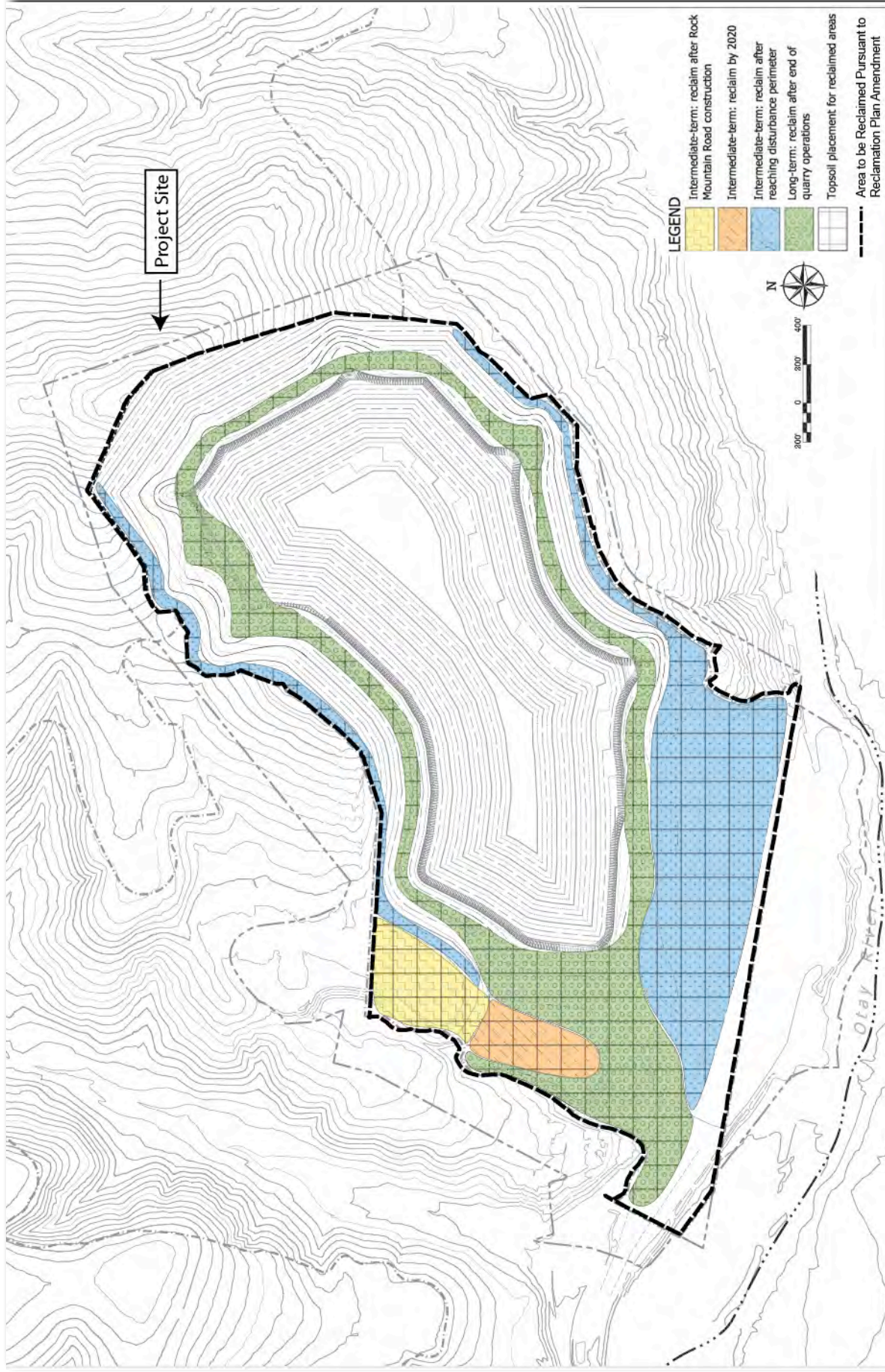


Figure 3-10. Reclamation Phasing

The second stage would consist of rough grading and would take approximately four weeks. Grading would be accomplished by utilizing on-site fill materials. This phase would require the use of two bulldozers, one front-end loader, four trucks, one water truck, one excavator, one blade, and a 10-person crew.

The third stage would consist of revegetation, which would occur during November through March for seeding purposes to take advantage of fall/winter rains and would likely last approximately four weeks. Work would be performed by a licensed landscape contractor specializing in native revegetation and habitat restoration. This stage would require the use of one bulldozer, several flatbed trucks, a hydroseed truck, one front-end loader, and hand-held equipment to be utilized by a 15-person crew.

The fourth stage would consist of monitoring and maintenance activities, which would occur over an approximately five-year period, or until plant success criteria has been met, whichever is longer. The proposed project would first be required to meet the requirements of the SWPPP/National Pollutant Discharge Elimination System (NPDES) permit which typically requires 75 percent vegetative cover for erosion control. SWPPP monitoring would need to be performed during construction activities associated with the Reclamation Plan Amendment, as outlined in the SWPPP, and until the Notice of Termination (NOT) is filed and approved. Two years following the execution of the new NPDES permit (2009-0009-DWQ), SWPPP monitoring would be required to be performed by a qualified person that has completed State Water Board-sponsored or other State-approved training. Post-NOT monitoring for both erosion and exotics control would be performed for approximately three to five years, or until success criteria has been met, whichever is longer. This type of monitoring is usually performed quarterly (seasonally) by one or two biologists. Maintenance in the way of exotics control would be performed monthly for the first six months and quarterly thereafter by a qualified maintenance contractor. Maintenance crews would consist of approximately ten people, depending on the amount of exotics control needed.

All four stages of reclamation plan implementation would occur during the daytime. No nighttime construction activity would occur.

### 3.7 DISCRETIONARY ACTIONS

A discretionary action is an action taken by an agency that calls for the exercise of judgment in deciding whether to approve or how to carry out a project. For the proposed Otay Valley Quarry Reclamation Plan Amendment project, approval of the Reclamation Plan Amendment by the City of Chula Vista City Council is required. Additionally, review of the Reclamation Plan Amendment by OMR is required prior to City approval.

Implementation of the proposed Reclamation Plan Amendment would not affect jurisdictional waters or endangered species. Therefore, other State or Federal permits would not be required. (See Section 4.6, *Biological Resources*, for a discussion of biological resources on and surrounding the Project Site and the project's potential to impact sensitive resources and habitat.)





### 4.0 ENVIRONMENTAL IMPACT ANALYSIS

The environmental analysis contained in this EIR has been developed to adequately address the environmental issues identified as needing further analysis. Additionally, this EIR addresses concerns raised by comments on the NOP and those received at the November 8, 2010, public scoping session, as presented under *Areas of Controversy/Issues to be Resolved* in the *Executive Summary*.

Based on an initial review of the project, the City of Chula Vista determined that the EIR for the proposed project should address the following environmental issues:

- Land Use, Planning, and Zoning
- Landform Alteration/Aesthetics
- Traffic, Circulation, and Access
- Noise
- Air Quality
- Biological Resources
- Cultural Resources
- Paleontological Resources
- Agricultural Resources
- Hydrology/Drainage/Water Quality
- Geology and Soils
- Public Services and Utilities
- Hazard/Risk of Upset
- Housing and Population
- Mineral Resources
- Greenhouse Gas Emissions

The environmental impact analysis seeks to determine the significance of potential impacts and to develop appropriate mitigation for impacts that have been determined to be significant. In order to facilitate the analysis of each issue, a standard format was developed to analyze each issue thoroughly. This format is presented below, with a brief discussion of the information included within each topic.

#### **Existing Environmental Setting**

This introductory discussion of each issue section describes the existing environmental conditions related to the specific issue being analyzed. In accordance with Section 15125 of the CEQA Guidelines, both the existing local and regional settings are discussed as appropriate and as they exist prior to implementation of the proposed project and during the preparation of this EIR. This section provides the baseline conditions with which environmental changes created by the project would be compared and analyzed.

The existing environmental conditions section is the baseline setting for documenting the nature and extent of environmental changes or impacts anticipated to result from project implementation. According to SMARA and the related 1978 San Diego County SMARA ordinance, if a mine was being operated under a permit before SMARA's enactment in January 1, 1976, then operation of that mine can continue as a vested right. The vested right is acquired by virtue of the mine being a nonconforming operation at the time of SMARA's enactment. Under SMARA, a vested right can be acquired even if no permit exists, if mining was a nonconforming use prior to SMARA's enactment. The vested right can be expanded if the intent to expand existed at the time the use became nonconforming. The former owners of the Otay Ranch commenced mining operations in 1948 when the County enacted zoning code Section 480, which required a permit for quarries. The County of San Diego approved a grading plan in 1973, which recognized the vested right to mine the Project Site, including those areas over which reclamation activities associated with the Reclamation Plan Amendment evaluated by this EIR are proposed. The vested right was reconfirmed by the Chula Vista City Council at a public hearing on December 16, 2008. Therefore, for the basis of

establishing a baseline for the impact analysis, this EIR assumes mining of the Project Site in accordance with the confirmed vested rights.

### **Threshold of Significance**

Pursuant to Section 15064.7 of the CEQA Guidelines, a threshold of significance is an identifiable quantitative, qualitative, or performance level criterion or criteria. Non-compliance with the threshold would normally mean the effect would be determined to be significant, and compliance with the thresholds would normally mean the effect would be determined to be less than significant.

In determining whether an impact is “significant,” Section 15064.7 of the CEQA Guidelines encourages each public agency to develop and publish thresholds of significance to use in determining the significance of an environmental impact. These thresholds may consist of identifiable quantitative, qualitative, or performance level criteria, of which non-compliance would mean the effect would be determined to be significant and compliance with the thresholds would mean the effect normally would be determined to be less than significant.

The City of Chula Vista has developed significance thresholds for certain environmental issue areas as part of the City’s Growth Management Policy. These significance thresholds provide the basis for distinguishing between impacts which are determined to be significant (i.e., impact exceeds the threshold of significance) and those which are less than significant. This EIR uses the City’s Thresholds of Significance, except in cases where none have been developed. In those cases, significance criteria used for the environmental analysis of each issue area in this section are derived from the Environmental Checklist, provided in Appendix G to the CEQA Guidelines. In some cases, thresholds adopted by other public agencies with jurisdiction over select environmental issues are used as thresholds of significance. Also, accepted technical and scientific data are used in other instances to determine if an impact would be considered significant. An effort has been made to avoid overly subjective significance criteria, which are not based on specific CEQA policies and/or generally accepted thresholds upon which significance can be determined.

### **Impact Analysis**

This section presents an evaluation of the impacts that would result from implementation of the proposed project. For the Otay Valley Quarry Reclamation Plan Amendment project, the analysis of environmental impacts is based on certain baseline conditions resulting from the vested rights allowed for mining the Project Site.

The impact analysis presented in this EIR identifies specific project-related direct and indirect, short term and long term, and unavoidable impacts associated with the proposed Reclamation Plan Amendment for the Otay Valley Quarry. A discussion of cumulative impacts is presented in a separate section titled *Cumulative Impacts* (Section 5.0).

Section 15126.2 of the CEQA Guidelines requires that an EIR “identify and focus on the significant environmental effects of the proposed project.” “Effects” and “impacts” have the same meaning under CEQA and are used interchangeably within this EIR. A “significant effect” or “significant impact” on the environment means “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project” (Section 15382 of the CEQA Guidelines). With respect to each potential effect, an analysis has been conducted in the EIR to determine if and to what extent:

- The project causes the identified “impact”
- The impact produces a substantial, or potentially substantial, change in the physical conditions within the area affected by the project (i.e., “significant”)
- The changed conditions are “adverse”

### ***Level of Significance Prior to Mitigation***

The Level of Significance Prior to Mitigation subsection provides a concise and brief statement as to whether or not a project impact would constitute a significant environmental effect.

### ***Mitigation Measures***

This section identifies those mitigation measures that are required to reduce potential impacts to below a level of significance and indicates whether the measures have already been incorporated into the project design. As applicable, mitigation measures are discussed in the following terms:

- Describe specific technical requirements and details for all mitigation measures.
- Assess the effectiveness of each measure; i.e., the extent to which the magnitude of impact will be reduced.
- If the proposed mitigation could result in a significant impact, disclose the potential impact and provide mitigation (e.g., remedial grading may result in significant biological impacts which require mitigation).

### ***Level of Significance After Mitigation***

This conclusion statement addresses the level of significance following implementation of any recommended mitigation measures.



# 4.1 LAND USE, PLANNING, AND ZONING

## 4.1.1 Existing Environmental Setting

### **Relevant Plans and Policies**

Presented below is a summary of the pertinent goals, objectives, and recommendations of the planning documents that affect the Otay Valley Quarry Reclamation Plan Amendment Project Site. The discussion of the project's compatibility with these plans is provided in Section 4.1.3, *Impact Analysis*.

### **State Mining and Reclamation Act**

The Department of Conservation provides services and information that promote environmental health, economic vitality, informed land-use decisions, and sound management of California's natural resources. Particularly relevant to the Otay Valley Quarry Reclamation Plan Amendment project is the Office of Mine Reclamation (OMR), which administers SMARA. SMARA addresses the need for a continuing supply of mineral resources, while at the same time preventing or minimizing impacts to public health, property, and the environment. SMARA is applicable to surface mining activities that affect more than one acre. OMR will review the Reclamation Plan Amendment prior to its approval by the City of Chula Vista.

### **City of Chula Vista General Plan**

The Chula Vista General Plan is a guiding document for the development of the City of Chula Vista. The General Plan was comprehensively updated in 2005. The General Plan addresses an area of approximately 91 square miles, and consists of the incorporated area of the City of Chula Vista, the existing sphere of influence, and additional unincorporated areas. The General Plan includes a General Plan Land Use Map, identifying land uses for the City of Chula Vista, and a series of elements that address specific aspects of the area's development. The Project Site is within the East Plan Area and is designated for Open Space, Residential, Commercial, and Light Industrial land uses. (See Figure 4.1-1, *City of Chula Vista Land Use Map*.) The Chula Vista East Plan Area Plan is included within the General Plan and addresses the issues and plans of the project area in greater detail.

The City's General Plan land use designations are intended to be used for "general planning purposes" and "describe a range of land uses that reflect different General Plan policies related to the type, location, density, and intensity of development." The land uses shown in the General Plan are "broad enough to provide flexibility when implementing the General Plan." The General Plan also states that "[p]roperty owners who have achieved a vested rights status retain the ability to develop in accordance with the land use designations in effect at the time of vesting prior to adoption of this General Plan Update."

# 4.1 LAND USE, PLANNING, AND ZONING

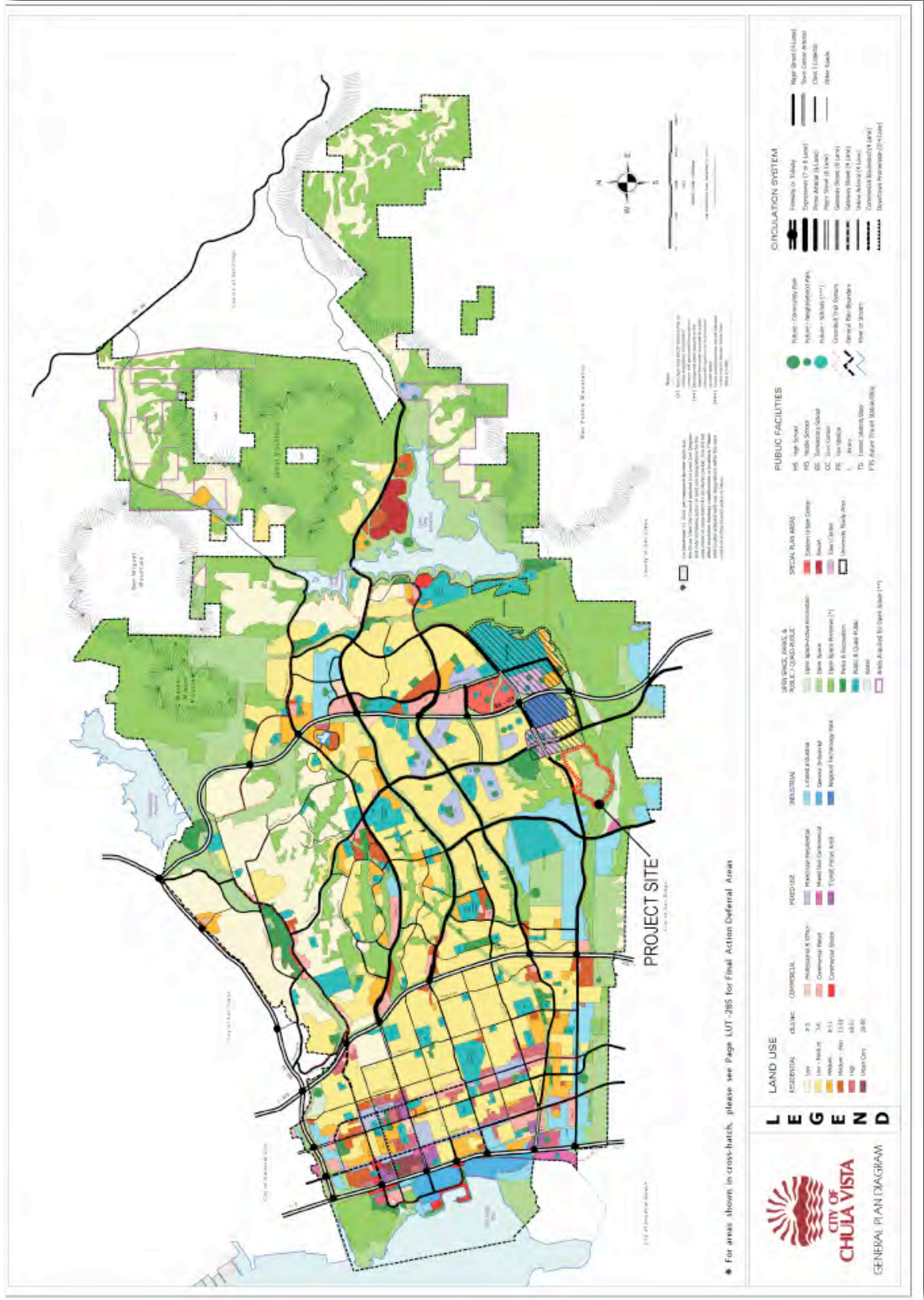


Figure 4.1-1. City of Chula Vista Land Use Map



The City of Chula Vista General Plan also allows for the clustering of residential units “onto a reduced land area on a particular site, typically in response to the site’s unique physical characteristics.” The General Plan advocates the concept of residential clustering in response to a project site’s unique physical characteristics, such as topography, geology, biological resources, or other similar constraints, or to provide additional amenities for project residents, such as creating open space and/or recreational opportunities. The degree of clustering, however, should not result in housing types that are inconsistent to the area, such as creating multi-story multifamily units in a single family-designated area. (In such an instance, smaller lot single-family dwelling and single-family attached units or townhomes would be more appropriate.) Furthermore, the use of clustering is not intended to yield a number of units that would otherwise not be approved on the site in a normal configuration. Clustering is part of the vision for the Otay Ranch Subarea, within which the Project Site is located.

The following policies and objectives relative to clustering, as outlined in Section 7.14, *Clustering*, of the Land Use and Transportation Element of the City of Chula Vista General Plan, are applicable to the proposed project:

- Objective LUT 29:* Allow for the clustering of residential development to respond to site constraints, and improve amenities for project residents.
- Policy LUT 29.1:* Clustering in response to site constraints must accomplish one or more of the following: preservation of natural landforms; significant reduction in the amount and extent of grading; response to geologic, soil, or other hazards; and/or protection of sensitive biological resources.
- Policy LUT 29.2:* Clustering may be allowed when it aggregates open space with the project for amenity and recreational purposes, and/or improves the visual and functional qualities of the project.

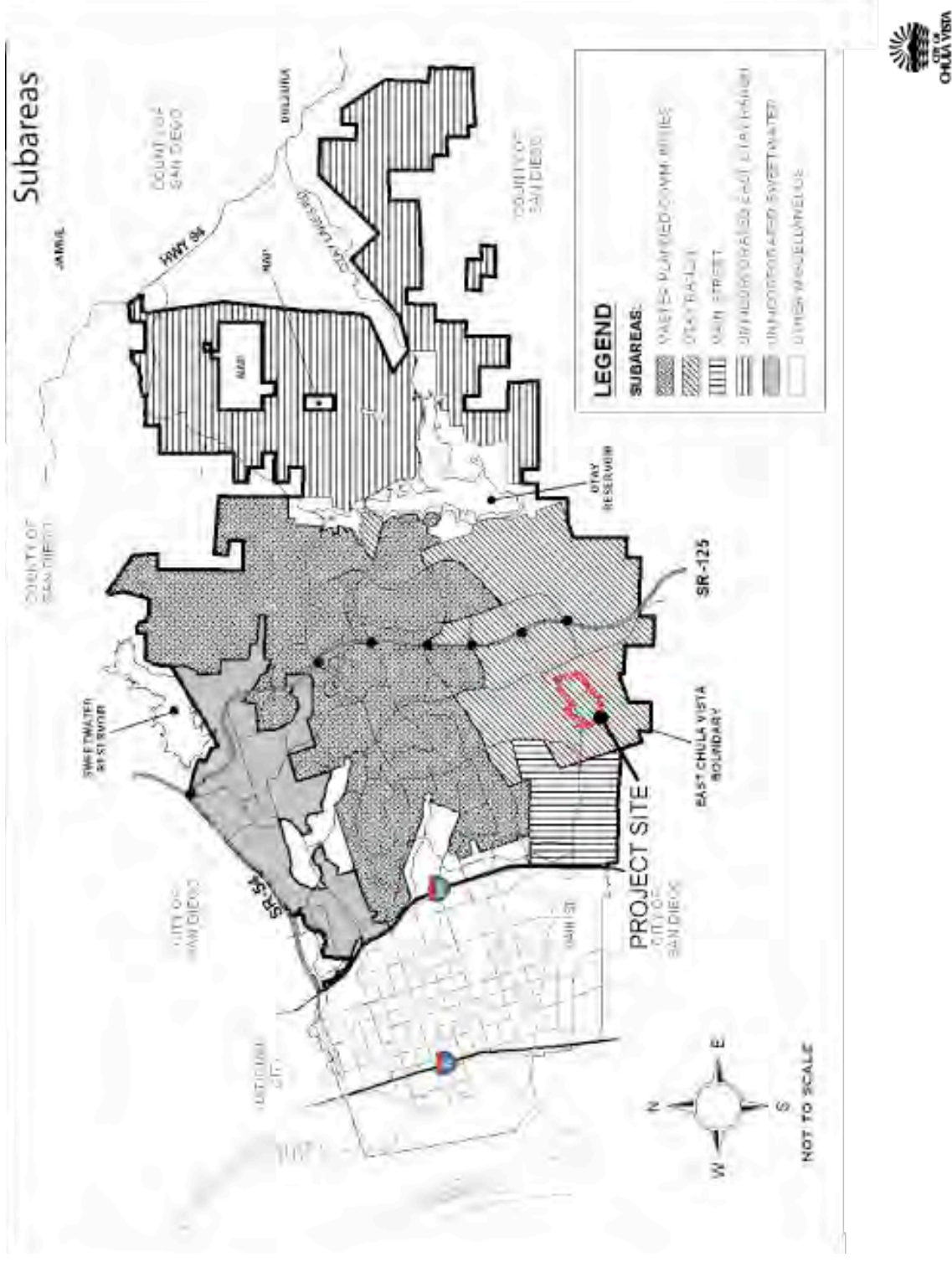
The City of Chula Vista General Plan includes the following objective relative to resource extraction:

- Objective E 5:* Efficiently extract regionally significant mineral resources in accordance with the Chula Vista MSCP Subarea Plan and require the appropriate reclamation of mined area for suitable future redevelopment, recreation, open space, and/or habitat restoration.

### **East Plan Area**

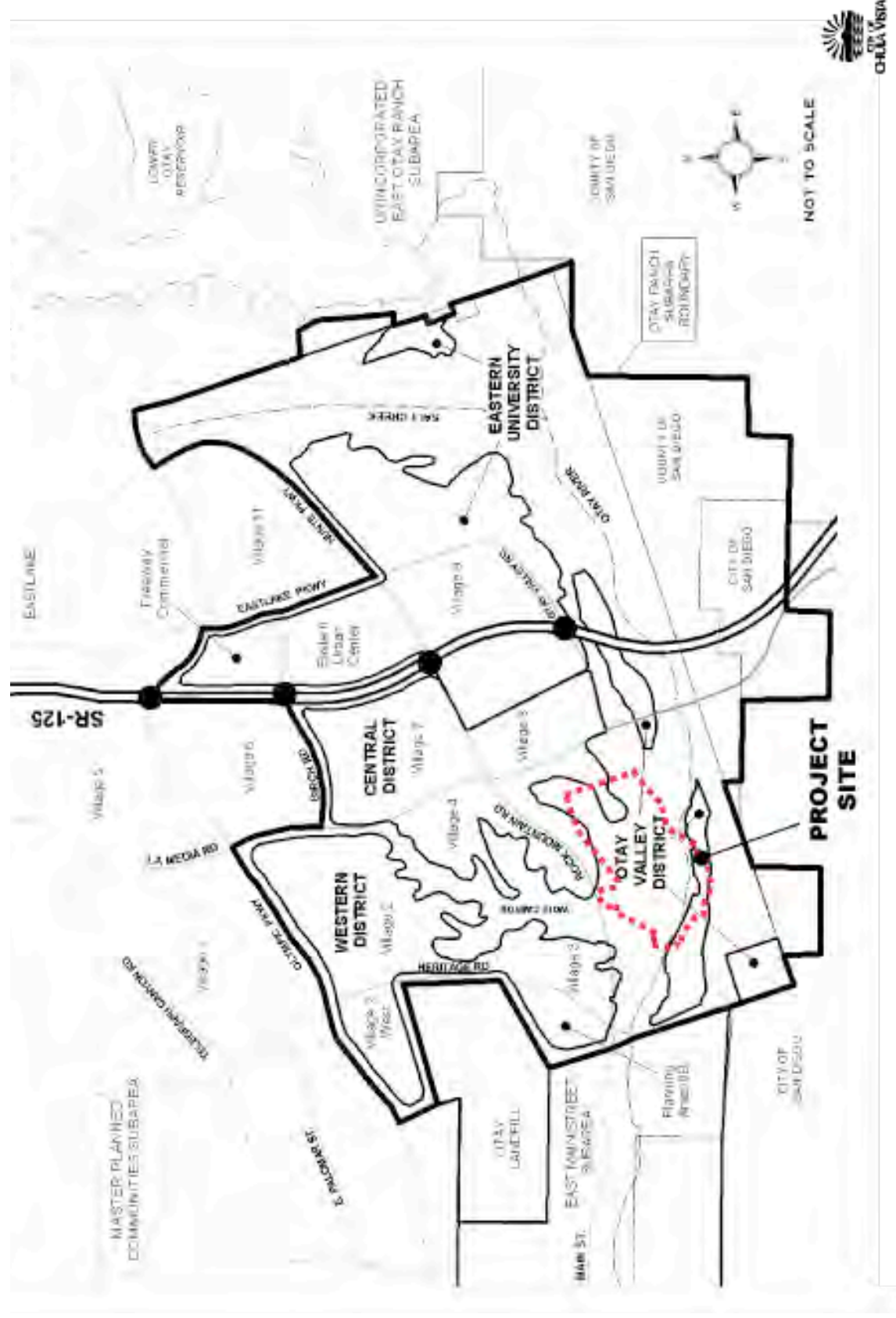
The proposed Otay Valley Quarry Reclamation Plan Amendment project is situated within the Central District of the Otay Ranch Subarea, within the East Plan Area component of the City of Chula Vista General Plan. (See Figure 4.1-2, *East Plan Area Map*, and Figure 4.1-3, *Otay Ranch Subarea Plan*.) The area plan (and its subsequent components) provides specific planning proposals based on the historical, economic, and community nature of the project area. The East Plan Area identifies six subareas (including the Otay Ranch Subarea), with the Otay Ranch Subarea is further broken out into four planning districts. The Central District, where the project is located, is comprised of Villages Four, Seven, and Eight of the Otay Ranch General Development Plan (GDP). (See Figure 4.1-4, *Central District Map*.) The Project Site is located within Village Four.

## 4.1 LAND USE, PLANNING, AND ZONING



**Figure 4.1-2. East Plan Area Map**

## 4.1 LAND USE, PLANNING, AND ZONING



**Figure 4.1-3. Otay Ranch Subarea Plan**

## 4.1 LAND USE, PLANNING, AND ZONING

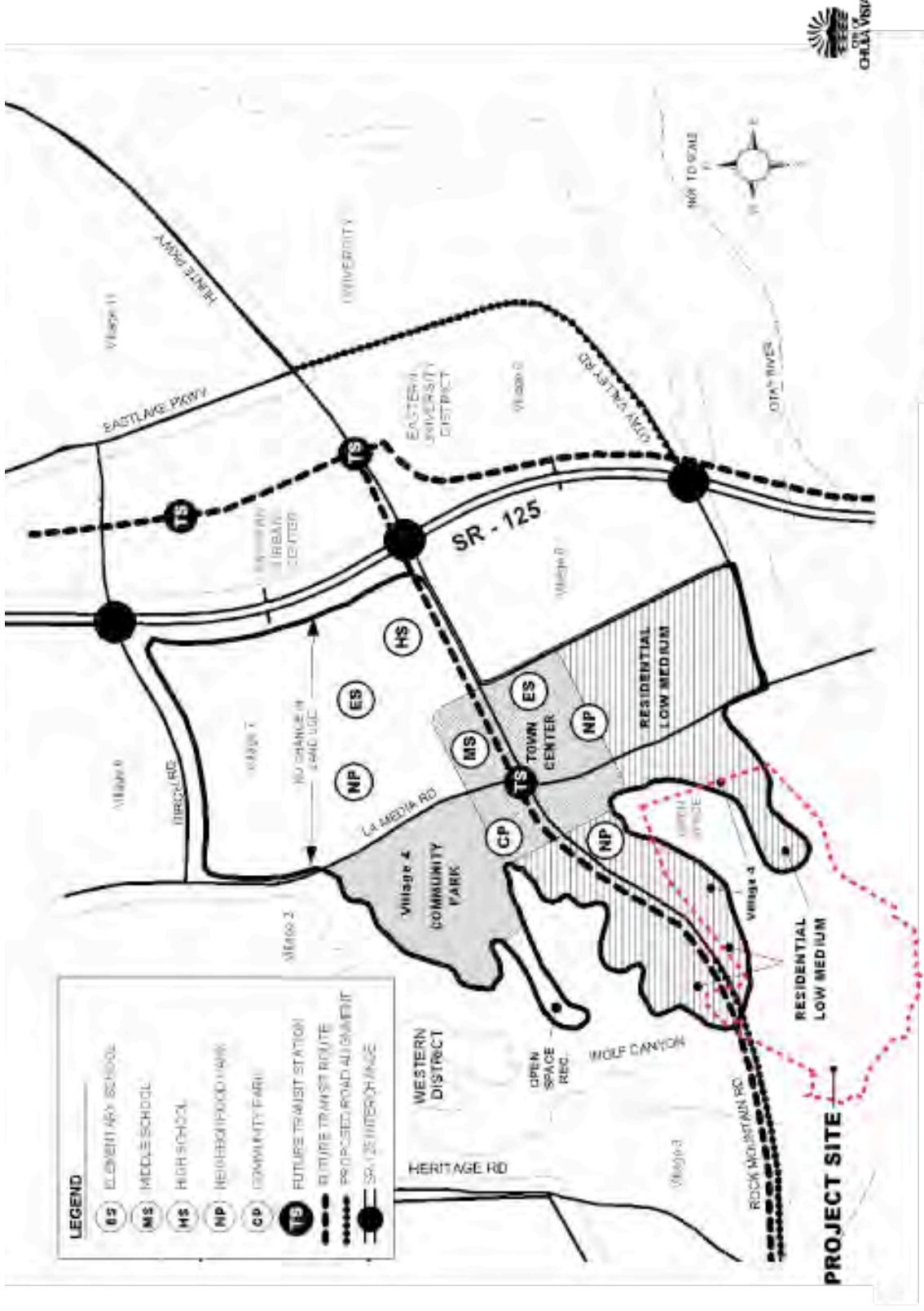


Figure 4.1-4. Central District Map

The vision for the Central District is to have a mixture of land uses and intensities that includes a large community park, a pedestrian-oriented mixed use town center, single-family and multi-family residential uses surrounding a typical village core, and a middle school. The large community park provides enhanced sports and recreation opportunities for all Otay Ranch residents. Single-family homes along Rock Mountain Road would have expansive views of Wolf Canyon, Rock Mountain, and the Otay Valley. Development in the Rock Mountain area is to be sensitively situated to preserve significant viewsheds and topographic features. A pedestrian-oriented town center, with transit services and town center arterials in the form of couplets or other pedestrian-oriented arterial street design, is planned along portions of La Media Road and Rock Mountain Road, where Villages Four, Seven, and Eight meet.

The City of Chula Vista General Plan identifies several objectives and policies for the East Plan Area associated with land use. The Land Use and Transportation Element identifies the following objectives and policies applicable to the proposed project:

- Objective LUT 13:* Preserve scenic resources in Chula Vista, maintain the City's open space network, and promote beautification of the City.
- Policy LUT 34.1:* Encourage development of parks and open space, as well as a network of pedestrian walkways for physical activity in all neighborhoods.
- Objective LUT 61:* Create balanced communities that can provide a high quality of life for residents.
- Policy LUT 71.1:* Continue to use the designations, policies, and regulations contained within the General Plan and Zoning Ordinance to guide development activities.
- Objective LUT 75:* Preserve and protect Otay Ranch's significant natural resources and open space lands with environmentally sensitive development.
- Policy LUT 75.1:* Create and maintain a comprehensive open space system throughout the Otay Ranch villages that, through environmental stewardship, restores and preserves nature's resources for generations to come.
- Objective LUT 81:* Develop a higher density, mixed use, transit-oriented town center positioned on the intersection of Rock Mountain Road and La Media Road, surrounded by lower density residential use and a large community park, and preserve Rock Mountain as an important landform and visual resource.
- Policy LUT 81.3:* Development near the significant viewsheds and topographic features of Rock Mountain should be done sensitively to preserve these important visual resources of Otay Ranch.

### **Chula Vista Municipal Code**

The current City zoning of the Project Site is "P-C Planned Community." The P-C Planned Community Zone allows for a variety of urban uses, including commercial, industrial, residential, recreational, and open space uses.

Chapter 19.69 of the City of Chula Vista Municipal Code directly addresses surface mining operations. The purpose and intent of this chapter is to ensure the continued availability of important mineral resources, while regulating surface mining operations as required by SMARA (PRC Sections 2710 et seq.), as amended; PRC Section 2207 (relating to annual reporting requirements); and State Mining and Geology Board regulations for surface mining and reclamation practice to ensure that:

- A. Adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses.
- B. The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment.
- C. Residual hazards to the public health and safety are eliminated. (Ord. 2921 Section 3, 2003).

Chapter 19.69.080 of the Chula Vista Municipal Code establishes the required findings for reclamation plan approvals for surface mining operations, which shall include the following:

1. That the reclamation plan complies with SMARA Sections 2772 and 2773, and any other applicable provisions, and with applicable requirements of state regulations (CCR Sections 3500 through 3505, and Sections 3700 through 3713).
2. That the reclamation plan and potential use of reclaimed land pursuant to the plan are consistent with this chapter, the city's general plan and any applicable resource plan or element.
3. That the reclamation plan has been reviewed pursuant to CEQA and the city's environmental review guidelines, and all significant adverse impacts from reclamation of the surface mining operations are mitigated to the maximum extent feasible as determined the CEQA document either through adoption of mitigation measures or a statement of overriding considerations.
4. That the land and/or resources to be reclaimed will be restored to a condition that is compatible with, and blends in with, the existing surrounding natural environment, topography, and other resources or land uses. If the city determines that on-site restoration is not feasible, suitable off-site lands may be set aside to compensate for related disturbance to resource values.
5. That the reclamation plan will restore the mined lands to a usable condition that is readily adaptable for alternative land uses consistent with the general plan and multiple species conservation program (MSCP).
6. That a written response to the State Department of Conservation has been prepared, describing the disposition of major issues raised by that Department. Where the city's position is at variance with the recommendations and objections raised by the state, said response shall address, in detail, why specific comments and suggestions were not accepted. (Ord. 2921 Section 3, 2003).

### **Otay Ranch General Development Plan (GDP)**

The P-C zone allows for planned communities, which subsequently allows for general development plans for the various subareas within Chula Vista. Planning for Otay Ranch Subarea is a cooperative effort between the City of Chula Vista and the County of San Diego. Members of the public have also regularly participated in the planning process. This joint planning effort has resulted in this Otay Ranch General Development Plan (GDP)/Subregional Plan (SRP), which sets forth a comprehensive plan for Otay Ranch. The GDP/SRP is an integrated policy document, which combines the requirements of the City of Chula Vista and the County of San Diego.

The Otay Ranch GDP envisions the majority of development within the Otay Ranch Subarea to occur in



clustered villages, with conveniently located homes, jobs, schools, parks, and other daily needs. These villages are to have well defined edges such as the Chula Vista Greenbelt, open spaces, or wildlife corridors. Additionally, the villages are to be mixed-use centers focused on shops, plazas, parks, and housing arranged to encourage people to meet and greet one another throughout the day and into the night. The villages should be fashioned to encourage walking and biking on streets linked to interesting destinations and have a wide variety of housing types, responding to the needs of families, singles, students, and seniors. Activity hubs are to be located next to transit stations and the villages should be designed for people, with inviting pedestrian-accessible public spaces, reducing reliance on the automobile. Villages are to offer residents the choice to live, work, play, learn, and shop within Otay Ranch. Nine villages are identified for the Otay Ranch Subarea.

Villages Four, Seven, and Eight comprise the Central District of the Otay Ranch Subarea. The Otay Valley Quarry Reclamation Plan Amendment project is located within Village Four. Village Four is comprised of approximately 453 acres located in the southern portion of the Otay Valley Parcel, west of La Media Road and south of Rock Mountain Road. The village surrounds Rock Mountain and contains a portion of Wolf Canyon. Village Four is located west of Village Eight, east of Wolf Canyon, and north of the Otay River Valley.

### **Multiple Species Conservation Program (MSCP)**

The MSCP is a comprehensive, long-term habitat conservation plan developed to address the needs of multiple species and the preservation of natural vegetation communities in southwestern San Diego County. The MSCP Subregional Plan, a "framework" plan for the 12 participating jurisdictions, was adopted by the City of San Diego and County of San Diego in 1997. The MSCP Subregional Plan addresses the potential impacts of urban growth, natural habitat loss, and species endangerment, and creates a plan to mitigate for the potential loss of "covered species" and their habitat due to the direct, indirect, and cumulative impacts of future development of both public and private lands within the MSCP's approximately 900-square mile study area.

The City of Chula Vista MSCP Subarea Plan is a policy document through which the MSCP Subregional Plan is implemented within the City's jurisdiction. The City's MSCP Subarea Plan provides a blueprint for habitat preservation and forms the basis for Federal and State incidental "take" permits for 86 plant and animal species within the City. The incidental take permits are issued by the United States Fish and Wildlife Service and the California Department of Fish and Game, also referred to as the "Wildlife Agencies".

The City of Chula Vista Final MSCP Subarea Plan was approved by the Chula Vista City Council in May 2003. The Subarea Plan provides conservation of covered species and their associated habitats. Specifically, the Plan includes: 1) a Quino checkerspot butterfly recovery component sufficient to warrant coverage for the species and making it the "86th" covered species under the City's requested incidental take permit; 2) additional conservation on a number of properties increasing the City's overall Preserve acreage; and 3) implementing ordinances and an implementing agreement to provide further assurance that the Subarea Plan will be implemented as described in the Plan. The City's Preserve will eventually encompass approximately 5,000 acres of the City's most sensitive open space areas. In addition, another approximately 4,200 acres outside the City's jurisdiction will be preserved as a result of development occurring within the City's urban boundaries. Lands set aside within the Preserve will be appropriately managed while still providing passive recreational opportunities for area residents and the public at large.

An Implementing Agreement (IA) was signed by the Wildlife Agencies in order to ensure implementation of the Chula Vista MSCP Subarea Plan. The IA serves as the legal agreement between the City of Chula Vista and Wildlife Agencies binding each of the parties to perform the obligations, responsibilities, and tasks assigned within the Agreement.

The City of Chula Vista MSCP Subarea Plan identifies several goals associated with protecting and preserving open space, habitat, and species. The following goals are applicable to the proposed project:

1. To conserve Covered Species and their habitats through the conservation of interconnected significant habitat cores and linkages.
2. To delineate and assemble a Preserve using a variety of techniques including public acquisition, on- and off-site mitigation, and land use regulations.

### **Otay Ranch Resource Management Plan (RMP)**

The Otay Ranch RMP is the Framework Management Plan for the Otay Ranch Preserve and is the critical document for resource protection on the Otay Ranch. The Otay Ranch RMP consists of two phases. An important part of the RMP is the creation of the Otay Ranch Preserve, established in the Phase I RMP.

The initial Otay Ranch RMP (known as Phase I) is a comprehensive plan for the preservation, enhancement, and management of sensitive, natural, and cultural resources within Otay Ranch. The Phase I RMP identifies an open space system as a permanent 11,375-acre resource preserve dedicated to the protection and enhancement of the multiple resources present on Otay Ranch. The Otay Ranch Resource Preserve (“Preserve”) also connects large open space areas through a series of wildlife corridors. In addition to the Preserve, other “restricted development” areas and parks have been designated in the Otay Ranch GDP. Combined, over 13,000 acres (or 62 percent of Otay Ranch) is to be preserved as open space or parks.

The Otay Ranch Preserve is a hard-line preserve and includes 11,375 acres to be set-aside as mitigation for impacts to sensitive resources resulting from Otay Ranch development that will occur both within the City and in the County. The Otay Ranch Preserve has been designed and will be managed specifically for protection and enhancement of multiple species present on Otay Ranch. These dedicated conservation lands will also serve to connect large areas of open space through a series of wildlife corridors, including connections between large, regional open spaces, such as Otay Reservoir and San Miguel Mountain. The entire Otay Ranch Preserve will be included in the MSCP Subregional Preserve.

Conveyance schedules and other implementation measures are established through the Phase 2 RMP. The Otay Ranch GDP/SRP provides that the Phase I RMP is to be implemented through the Phase 2 RMP. Unlike the Phase I RMP, the Phase 2 RMP is not a single plan or document, but rather a process. The Phase 2 RMP encompasses a series of tasks that must be performed over time throughout implementation of the Otay Ranch GDP. Some Phase 2 RMP tasks are fully satisfied upon the completion of a single study or the creation of a plan. Other Phase 2 RMP tasks must be completed as a condition of approval of subsequent Otay Ranch Sectional Planning Areas (SPAs). Still other Phase 2 RMP tasks must be performed over time, even if there are no pending discretionary actions.

The Phase 2 RMP establishes specific conveyance standards for achieving assembly of the 11,375-acre Otay Ranch Preserve, which will mitigate for impacts to biological resources from development projects,

including planned infrastructure within the Otay Ranch. A conveyance schedule was adopted, which provides that for each acre of development impact to land within Otay Ranch, 1.188 acres of habitat is dedicated into the Otay Ranch Preserve, regardless of the existence of habitat or of the habitat value of the land being developed. Because the first phases of development in Otay Ranch are occurring on the portions of the Otay Valley Parcel where there are few sensitive resources, substantial habitat land has been offered for dedication into the Otay Ranch Preserve well in advance of corresponding impacts.

The dominant feature linking the three Otay Ranch parcels is the Otay River system, which includes a tributary system of canyons and drainage courses and the Otay Lakes. The combination of coastal sage scrub and other habitats found on the Otay Ranch, the varying geography, and the presence of several plant communities make the Otay Ranch a unique biological resource. Large undisturbed blocks of coastal sage scrub, maritime succulent scrub, chaparral, and other habitats will be preserved throughout the Otay Ranch.

### **Otay Valley Regional Park Concept Plan (OVRP)**

OVRP is a multi-jurisdictional planning effort by the City of Chula Vista, County of San Diego, and the City of San Diego. In 1990, the jurisdictions entered into a Joint Exercise of Powers Agreement for coordinated planning, acquisition, and design for OVRP. The OVRP will provide residents and visitors recreational opportunities ranging from playing fields and picnic areas to hiking, biking, and horse trails. At the same time, the park will protect open space, wildlife, historic, agricultural, and archaeological resources. The OVRP will represent one of the largest open space areas within the South Bay of San Diego County, linking south San Diego Bay with Upper and Lower Otay Lakes. It will extend about 11 miles inland from the southeastern edge of the salt ponds at the mouth of the Otay River, through the Otay River Valley, to the land surrounding both Upper and Lower Otay Lakes.

The Concept Plan for the OVRP was adopted in 2001. Currently, much of the land within the Concept Plan boundaries is privately owned and a portion has development potential based on existing zoning or other land use plans. The Concept Plan does not change existing zoning, land use plans, or add new development regulations. It also does not preclude private development. It does, however, provide policy direction for the jurisdictions for coordinated land acquisition and development for the regional park within the framework of private property rights. This Concept Plan does not call for specific types of recreational development or give detailed design plans for specific areas. These development decisions will be made as master plans and site specific development plans are prepared.

The Otay Valley Regional Park Concept Plan identifies several goals for the park. The following goals are applicable to the proposed project:

- Protect environmentally sensitive areas
- Enhance park/open space activities and resources

Additionally, the OVRP designates Rock Mountain as part of a Park Study Area. The following policy pertains to Rock Mountain:

- Consider regional recreation uses at Rock Mountain when [mining] operations are discontinued. If recreational uses are not appropriate, consider open space uses or other uses compatible with the OVRP.

### **City of Chula Vista Greenbelt Master Plan**

The Greenbelt is described in the City's General Plan as the backbone of an open space and park system that extends throughout the City. Comprised of a series of open space segments, the Greenbelt system will be connected by a multi-use trail extending through each segment. Essentially, the Greenbelt creates an open space border around the City. This Greenbelt is comprised of a variety of natural and park-like elements; from the channelized Sweetwater River, along golf courses and banks of the Otay Lakes, following the Otay River Valley to the Chula Vista Bayfront.

Each Greenbelt segment offers unique opportunities for passive and/or active recreation that may be connected by a continuous trail system. Recognizing these opportunities within each segment will serve to enhance and preserve the benefits and natural amenities of the greenbelt system. The intent of the Greenbelt Master Plan is to identify opportunities and plan to develop parks and trails as funding becomes available or through the development of master planned communities.

One of the key components of the Greenbelt is the multi-use trail that serves to connect the parks and open space of each Greenbelt segment. Trails are defined as paths used for walking, bicycling, horseback riding, or other forms of recreation or transportation. Multi-use trails are trails designed for a variety of users, such as bicyclists, equestrians, pedestrians, joggers, and other non-motorized activities. Rural trails provide access to natural open space areas, and are designed to minimize impacts to natural resource areas, limit access to maintenance and emergency vehicles, and may limit the types of users depending on permitted uses in these resource areas.

In the City's General Plan, the Greenbelt is divided into segments that roughly follow the boundaries of the City along the Sweetwater River, Salt Creek and Otay Lakes, Otay River Valley, and the San Diego Bay. The Greenbelt is not entirely located within the jurisdictional boundaries of the City. Portions of the Greenbelt are located within the Cities of National City and San Diego, the County of San Diego, and the San Diego Port District.

The City of Chula Vista Greenbelt Master Plan identifies several goals associated with the provision, establishment, and maintenance of a regional trail. The following goals are applicable to the proposed project:

- Goal 1.0: To establish a comprehensive and coordinated greenbelt system that visually reinforces the natural character of the community and integrates unique historic and cultural resources, open space areas, creeks, and trails.
- Goal 2.0: To provide connected open space areas surrounding Chula Vista to enhance the natural beauty and to preserve native biological and cultural resources, as well as sensitive habitats.

### **4.1.2 Thresholds of Significance**

Appendix G of the CEQA Guidelines is used to provide the significance thresholds with regard to Land Use, Planning, and Zoning. Based on CEQA Guidelines Appendix G, a project could be regarded as having a significant impact on land use, if it would:

- Physically divide an established community;

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any habitat conservation plan or natural community conservation plan.

### 4.1.3 Impact Analysis

The Project Site is located in a relatively undeveloped portion of Chula Vista. Surrounding uses include undeveloped land uses on all sides. Further south of the Project Site are industrial uses; to the north are residential uses; and to the west are commercial, industrial, and entertainment uses. The circulation network and access to these uses has been established. The proposed reclamation of the Project Site does not in any way divide the established community; the proposed Reclamation Plan Amendment would not divide an established community.

Most of the area adjacent to the Project Site is planned as open space. Due to topography and access, future communities lying to the north, west, and east have been accordingly master planned as part of the Otay Ranch Development. Therefore, the proposed project would not physically divide future communities that may develop in the area.

The proposed project is consistent with the General Plan's objectives and policies. The reclamation of the Project Site as described in the Reclamation Plan Amendment would reclaim land in a manner suitable for uses identified in the underlying P-C zone.

Portions of land which would be reclaimed as part of the proposed project are located within Village Four of the Otay Ranch GDP. These portions of Village Four encompass a 115-acre land area, of which approximately 86 acres are designated Low-Medium Residential and 29 acres would remain open space within the area to be reclaimed under the proposed project. The 29-acre area includes the location of the water body. The clustering policies of the City of Chula Vista General Plan and the Otay Ranch General Development Plan allow and promote the clustering of development within the Otay Ranch Subarea of the Central District of the East Plan Area, within which the Project Site is located. As such, the proposed Reclamation Plan Amendment does not preclude the subarea from realizing its residential housing unit projections, as clustering allows for residential uses to be congregated in villages within the subarea, resulting in no net loss of residential units at the appropriate density range for the subarea. The 115-acre land area is consistent with General Plan designations in that such designations are generalized land use categories to be used as a planning tool to implement General Plan policies. Therefore, the 115 acres must be looked at in totality. The 29 acres of land to be reclaimed as a water body are part of a larger 115-acre land area designated Low-Medium Residential in the General Plan. Approximately 86 acres of land adjacent to the boundary of the proposed Reclamation Plan Amendment would remain available for residential development.

Pursuant to General Plan clustering provisions, the number of units that could be located on the Project Site will be consistent with other planned housing in the area. To illustrate, the Otay Ranch GDP provides for a maximum residential density of 453 single-family residences. Assuming a density range of three to six dwelling units to the acre as is required for Low-Medium Residential, approximately 258 to 516 residential units could be developed on the remaining 86 acres within Village Four.

The constraints associated with the vested mining right and the ultimate topography of the Otay Valley Quarry support the conclusion that the elimination of approximately 29 acres of Low-Medium Residential designated land does not make the Reclamation Plan Amendment inconsistent with the overall goals and policies of the General Plan. This is particularly the case because the General Plan calls for flexibility, recognizes vested rights, and allows for clustering of the overall residential density onto the remaining Low-Medium Residential land.

Additionally, the project is consistent with General Plan objectives relating to mineral resource extraction. The proposed Reclamation Plan Amendment would be implemented once the minerals found at Otay Valley Quarry have been efficiently extracted. The Reclamation Plan Amendment would reclaim the Project Site and leave the site in a manner suitable for future uses, consistent with the General Plan.

The current City zoning of the involved property is “P-C Planned Community.” The P-C Planned Community Zone allows for a variety of urban uses, including commercial, industrial, residential, recreational, and open space uses, the latter of which is consistent with the proposed uses after reclamation of the Otay Valley Quarry.

The Reclamation Plan Amendment is consistent with the requirements of Chapter 19.69 of the Chula Vista Municipal Code in that it complies with all of the requirements of SMARA. All engineering plans and the geological analysis also have been approved and signed by a civil engineer and geologist licensed to practice in the State of California. The Reclamation Plan Amendment provides for the reclamation of mined land at the earliest possible time consistent with the vested mining activities of the Otay Valley Quarry and the requirements of Chapter 19.69. A financial assurance in a form and amount acceptable to the City is also required to ensure implementation of the necessary elements of the Reclamation Plan Amendment, which include, but are not limited to, revegetation and landscaping, restoration of habitat, water quality, slope stability, erosion and drainage control, and disposal of hazardous materials, if any.

As stated above, the Reclamation Plan Amendment for Otay Valley Quarry has been prepared in accordance with the requirements of SMARA found in California Public Resources Code (PRC) Section 2710 *et seq.*, Title 14 of the CCR Section 3500 *et seq.* and the City of Chula Vista’s implementing ordinance. The Reclamation Plan Amendment is prepared in a format that addresses each reclamation plan requirement found in SMARA (primarily PRC Section 2772 and Section 2773) and the standards that must be met in reclamation implementation, as specified in CCR Section 3503 and CCR Section 3700 through CCR Section 3713. The Reclamation Plan Amendment also contains site specific standards for evaluating compliance as required by the Statute. Acting as the lead agency under the Statute, the City will also review information provided by the applicant in support of the proposed amount of the financial assurance and has approved both the form and amount of the financial assurance for this Reclamation Plan Amendment prior to Reclamation Plan Amendment approval.

As required by the City of Chula Vista General Plan, the Reclamation Plan Amendment also is consistent with the provisions of the City’s MSCP Subarea Plan (including the Otay Ranch RMP), Chula Vista Greenbelt Master Plan, and the OVPR Concept Plan. Since the proposed Reclamation Plan Amendment would leave the Project Site as vacant open land, the Reclamation Plan Amendment is also consistent with the General Plan Area Open Space Map and the Chula Vista Greenbelt Master Plan. None of the trails or greenbelt systems contemplated by the Greenbelt Master Plan would be precluded by the Plan’s reclamation activities. The Reclamation Plan Amendment improves compliance with the General Plan’s Natural



Systems Open Space Map by adding acreage designated as developed land to the open space system shown on the Open Space Map included within the General Plan. The proposed habitat restoration and water body features of the Reclamation Plan Amendment also are consistent with the ultimate goals of the Otay Valley Regional Park Concept Plan. The Reclamation Plan Amendment would help maintain the visual significance of Rock Mountain and would retain the eastern peak of Rock Mountain as a potential public access area. The Reclamation Plan Amendment also is consistent with the boundaries of the City's MSCP Subarea Plan.

The Otay Ranch RMP is intended to serve as a comprehensive planning document that addresses the preservation and management of sensitive resources in the Otay Ranch. Reclamation consistent with the Reclamation Plan Amendment would not reduce the overall size of the preserve and would provide conservation of sensitive resources that is consistent with that described in the RMP. The Reclamation Plan Amendment also demonstrates compliance with the edge effects standards of the RMP during the construction phase of the reclamation activities.

The Reclamation Plan Amendment is consistent with the MSCP Subarea Plan. The boundary of the Otay Valley Quarry does not impact any of the areas designated for preservation in the Subarea Plan and, therefore, does not prevent the preservation of the necessary core biological resource areas and associated habitat linkages as required by the MSCP Subarea Plan. In addition, although the proposed water body and adjacent open space areas would be fenced for safety purposes, they would nonetheless provide habitat value after reclamation for a number of species, including birds and smaller mammals. Consistency with the MSCP Subarea Plan also ensures an adequate habitat corridor linking the Otay River Valley with Wolf Canyon.

The proposed Reclamation Plan Amendment does not conflict with the OVRP Concept Plan. The Concept Plan calls for the enhancement of open space resources, which is consistent with the proposed Reclamation Plan Amendment's treatment of mined slopes and allowing the quarry pit to fill as a water body. Additionally, the proposed Reclamation Plan Amendment preserves the eastern peak of Rock Mountain, retaining this regional resource, recognized by the OVRP Concept Plan. The proposed Reclamation Plan Amendment does not preclude future use of Rock Mountain as a recreational or open space amenity, as identified in the Park Study Area's policy.

### **4.1.4 Significance of Impacts Before Mitigation**

The proposed project would not result in a physical divide of the existing community. Furthermore, the reclamation of the Otay Valley Quarry is not anticipated to divide the future community that may develop within the Central District, in particular Village Four.

The Reclamation Plan Amendment's conformance to local regulations results in a less than significant impact. The Reclamation Plan Amendment is in accordance with SMARA, as well as regulations within the City of Chula Vista General Plan and Municipal Code. Use of the reclaimed mining site for open space does not preclude future development of the Central District (in particular, Village Four) to meet its full potential. The proposed project is not in conflict with any applicable habitat preservation plan or natural community conservation plan. The proposed project does not encroach upon the City's MSCP Preserve area.

Section 4.6, *Biological Resources*, addresses the project's impacts to biological resources on and surrounding the Project Site. As presented in that section, the project has the potential for indirect impacts on the adjacent

MSCP Preserve. Mitigation measures are required, which would reduce impacts to below a level of significance.

### **4.1.5 Mitigation Measures**

Mitigation measures BIO-1 – BIO-4 are required to mitigate indirect impacts to the MSCP Preserve to below a level of significance. (See Section 4.6, *Biological Resources*.) No other mitigation measures are necessary.

### **4.1.6 Level of Significance After Mitigation**

With the exception of indirect impacts to the adjacent MSCP Preserve, impacts associated with Land Use, Planning, and Zoning are less than significant and do not require mitigation. Indirect impacts to the adjacent MSCP Preserve would be mitigated to below a level of significance with the incorporation of mitigations measures presented in Section 4.6, *Biological Resources*.

The Reclamation Plan Amendment is consistent with the City of Chula Vista General Plan and Otay Ranch General Development Plan. No significant impacts would result from implementation of the proposed Reclamation Plan Amendment.

## 4.2 LANDFORM ALTERATION/AESTHETICS

Dudek prepared a *Visual Resources Letter* for the Otay Valley Quarry Reclamation Plan Amendment, dated January 20, 2011. A summary of the *Visual Resources Letter* is presented in this section. A complete copy of the letter is included in Appendix B to this EIR.

### 4.2.1 Existing Environmental Setting

#### **Relevant Plans and Policies**

Presented below is a summary of the pertinent goals, objectives, and recommendations of the planning documents that affect the Otay Valley Quarry Reclamation Plan Amendment Project Site with regard to landform and aesthetics. The discussion of the project's compatibility with these plans, as well as the Project Site's physical surroundings, is provided in Section 4.2.3, *Impact Analysis*.

#### **California Scenic Highway Program**

The California Scenic Highway Program was created to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of adjacent lands. The program defines the process for the designation of official scenic highways. A legislatively appointed body, the Departmental Transportation Advisory Committee (DTAC), recommends program criteria, reviews applications, and advises the Caltrans Director to revoke scenic highways that are no longer in compliance with the program. According to the California Scenic Highway Mapping System, there are no eligible or officially designated state scenic highways within the project vicinity (Caltrans 2010).

#### **California Street and Highways Code**

The California Street and Highways Code establishes standards for the development and designation of official scenic highways and assigns the responsibility for the development of scenic highways to local jurisdictions. The Streets and Highways Code establishes the State Scenic Highway system, which includes highways that are either officially designated as State Scenic Highways or are eligible for such designation. Section 263 of the Street and Highways Code lists the highways that are officially designated or are eligible for designation. According to Section 263.6, the State Scenic Highway system includes SR-125 from SR-94 near Spring Valley to I-8 near La Mesa, as well as I-5 from the international border with Mexico to SR-75 and from San Diego opposite from Coronado to SR-74 near San Juan Capistrano. The Project Site is within the vicinity of SR-125; however, it is not near the section designated as a scenic highway.

#### **Chula Vista General Plan**

The City of Chula Vista General Plan identifies several objectives and policies associated with protecting the visual quality of the City. The Land Use and Transportation Element identifies the following objectives and policies applicable to the proposed project:

*Objective LUT 13:* Preserve scenic resources in Chula Vista, maintain the City's open space network, and promote beautification of the City.

- Policy LUT 13.1:* Identify and protect important public viewpoints and viewsheds throughout the planning area, including features within and outside the planning area, such as mountains, native habitat areas, San Diego Bay, and historic resources.
- Policy LUT 13.2:* Continue to implement the City's planned open space network.
- Policy LUT 71.1:* Continue to use the designations, policies, and regulations contained within the General Plan and Zoning Ordinance to guide development activities.
- Objective LUT 75:* Preserve and protect Otay Ranch's significant natural resources and open space lands with environmentally sensitive development.
- Policy LUT 75.1:* Create and maintain a comprehensive open space system throughout the Otay Ranch villages that, through environmental stewardship, restores and preserves nature's resources for generations to come.
- Objective LUT 81:* Develop a higher density, mixed use, transit-oriented town center positioned on the intersection of Rock Mountain Road and La Media Road, surrounded by lower density residential use and a large community park, and preserve Rock Mountain as an important landform and visual resource.
- Policy LUT 81.3:* Development near the significant viewsheds and topographic features of Rock Mountain should be done sensitively to preserve these important visual resources of Otay Ranch.
- Objective LUT 85:* Establish a distinctly identifiable corridor that creates a unique sense of place: through its integration of diverse uses and land use Focus Areas into a cohesive development pattern; and its linkages between the District's Focus Areas, adjoining communities, and open spaces and the sub-region.

The Chula Vista General Plan Land Use and Transportation Element also states that single-family homes along Rock Mountain Road have expansive views of Wolf Canyon, Rock Mountain, and the Otay Valley. Development in the Rock Mountain area is to be sensitively situated to preserve significant viewsheds and topographic features.

### **Scenic Roadways**

The Chula Vista General Plan identifies scenic roadways within the City as areas where views of unique natural features and roadway characteristics, including enhanced landscaping, adjoining natural slopes, or special design features, make traveling a pleasant visual experience. The General Plan identifies two types of scenic highways – urban and rural. Urban routes are those that “traverse an urban area, with the scenic corridor offering a view of attractive and exciting urban scenes.” Rural routes provide for an enriched experience of natural scenic resources and aesthetic values and may include large preserved canyons or natural areas, or areas within the Chula Vista Greenbelt.

According to the Designated Scenic Roadways Map in the Land Use and Transportation Element of the General Plan, Rock Mountain Road (immediately south of the Project Site) from Heritage Road to SR-125

is designated as a scenic roadway. In addition, Heritage Road (west of the Project Site) from Telegraph Canyon Road to the City's southern boundary is also designated as a scenic roadway.

### **Existing Visual Environment**

The Project Site is located along the southern boundary of the City. The Project Site is north of the Otay River Valley and the OVRP, east of I-805, and west of SR-125. Specifically, the project is located on Rock Mountain. Elevations of the Project Site range from approximately 170 feet AMSL in the southwest to 598 feet AMSL in the northeastern portion of the site. The City of Chula Vista's General Plan designates the Project Site and surrounding lands as Open Space and Open Space Preserve.

Current views into the mining site from the Otay River Valley and the OVRP reflect the on-going mining operations. Trucks may be seen coming in and out of the quarry. Distant views of mined slopes may be possible, depending on viewpoint.

Upon completion of mining, the Project Site will be configured as an open pit. The final phase of mining will consist of the elimination of some of the horizontal benches typical of hard rock mining and creation of areas of sheer slopes to conform to surrounding native vegetation. The quarry floor is planned at a maximum depth of approximately 300 feet below mean sea level; and quarry high walls are designed to be cut at a grade not to exceed 1:1 for a stable condition, except in the areas where benching will be eliminated to create sheer slopes. Sheer slopes are anticipated to be no greater than 1:3. The depression resulting from mining will fill naturally with groundwater and run-off from the surrounding slopes.

### **On-Site Land Use**

Land uses within the project boundary consist of existing mining and undeveloped mineral reserve areas. Mining and processing activities have been centered at the terminus of the site access road for the past several decades. As excavation has reached current design grade, extraction operations have gradually moved north, creating an open face that further accesses the Rock Mountain mineral reserve.

### **Off-Site Land Use**

Surrounding land uses include open space/preserve areas to the immediate east, south, and west; Rock Mountain is located to the north. Land uses within the general vicinity of the Project Site include future Otay Ranch Village Four and the Otay Landfill to the northwest and Cricket Wireless Amphitheater and developed residential uses to the southwest.

### **4.2.2 Thresholds of Significance**

According to Appendix G of the CEQA Guidelines, a project may have a significant impact on aesthetics if the project would:

1. Have a substantial adverse effect on a scenic vista;
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
3. Substantially degrade the existing visual character or quality of the site and its surroundings; or
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

These guidelines establish the thresholds for evaluating environmental impacts associated with landform alteration/aesthetics.

### 4.2.3 Impact Analysis

The proposed project involves a Reclamation Plan Amendment for the Otay Valley Quarry. The Reclamation Plan Amendment would be implemented following depletion of mineral resources at the site, estimated to occur in about the year 2089. A substantial change in the landform will have occurred prior to reclamation; the mining activities would leave the site with a landform that would form the basis for reclamation (see Figure 3-2, *Mine Grading Plan*). Substantial grading following reclamation would not occur (see Figure 3-6, *Proposed Reclamation Grading*). As such, significant landform alteration impacts are not associated with the proposed Reclamation Plan Amendment.

The proposed Reclamation Plan Amendment is consistent with City of Chula Vista General Plan objectives and policies. As identified in Section 4.2.1, above, many General Plan objectives and policies pertain to the creation and preservation of open spaces and Wolf Canyon. By reclaiming the mining site as open space and a water body, the proposed Reclamation Plan Amendment is consistent with the General Plan.

The topography of the Project Site, as well as intermittent stockpile locations, operational equipment, and processing plant facilities, limits views within and around the quarry. Where available, current views of the Project Site include on-going mining and natural resources processing activities, disturbed land and associated vegetation, exposed cut slopes, and mining operational equipment. Surrounding views include northwesterly views of Wolf Canyon, westerly views of Cricket Wireless Amphitheater, and southwesterly views of Chula Vista urban development, as well as views of rolling hills and open space to the north, east, and southeast.

The proposed project is located within the 28-mile designated open space area of the Chula Vista Greenbelt that surrounds the City of Chula Vista. The Greenbelt consists of general open space, the City's MSCP Preserve lands, trails, and connections between City public parks. Additionally, the OVRP Concept Plan's trail location would be directly south adjacent to the Project Site boundary. As such, the proposed project may be considered to be within the vicinity of a scenic vista. Views of the Project Site can be seen in the foreground and middleground from the south and southwest towards the Otay River bank.

A visual simulation has been prepared for the proposed project by Dudek (Figures 4.2-1 through 4.2-5). A *Photo Simulation Key Map* is presented in Figure 4.2-1. The visual simulation illustrates views into the site from four locations within the project vicinity: views northeasterly from Otay Valley Road (Figure 4.2-2, *Photo Simulation A*); south-facing views from the terminus of La Media Road (Figure 4.2-3; *Photo Simulation B*); northeasterly views from the project access road, Wiley Road within the OVRP (Figure 4.2-4, *Photo Simulation C*); and internal views southeasterly from the central slopes within the western portion of the Project Site (Figure 4.2-5, *Photo Simulation D*).



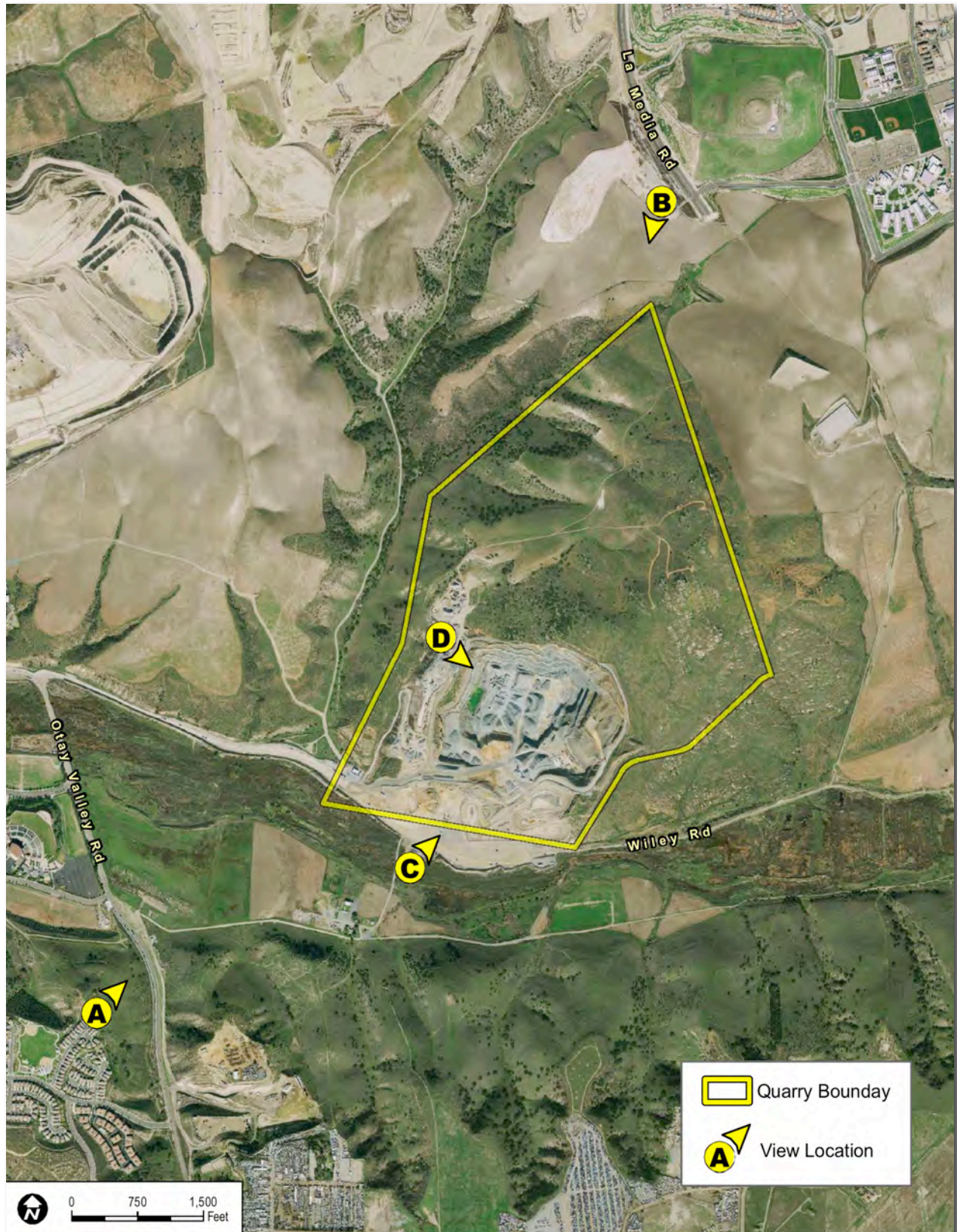


Figure 4.2-1. Photo Simulation Key Map



## 4.2 LANDFORM ALTERATION/AESTHETICS

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Figure 4.2-2. Photo Simulation A

## 4.2 LANDFORM ALTERATION/AESTHETICS

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Figure 4.2-3. Photo Simulation B



## 4.2 LANDFORM ALTERATION/AESTHETICS

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Figure 4.2-4. Photo Simulation C

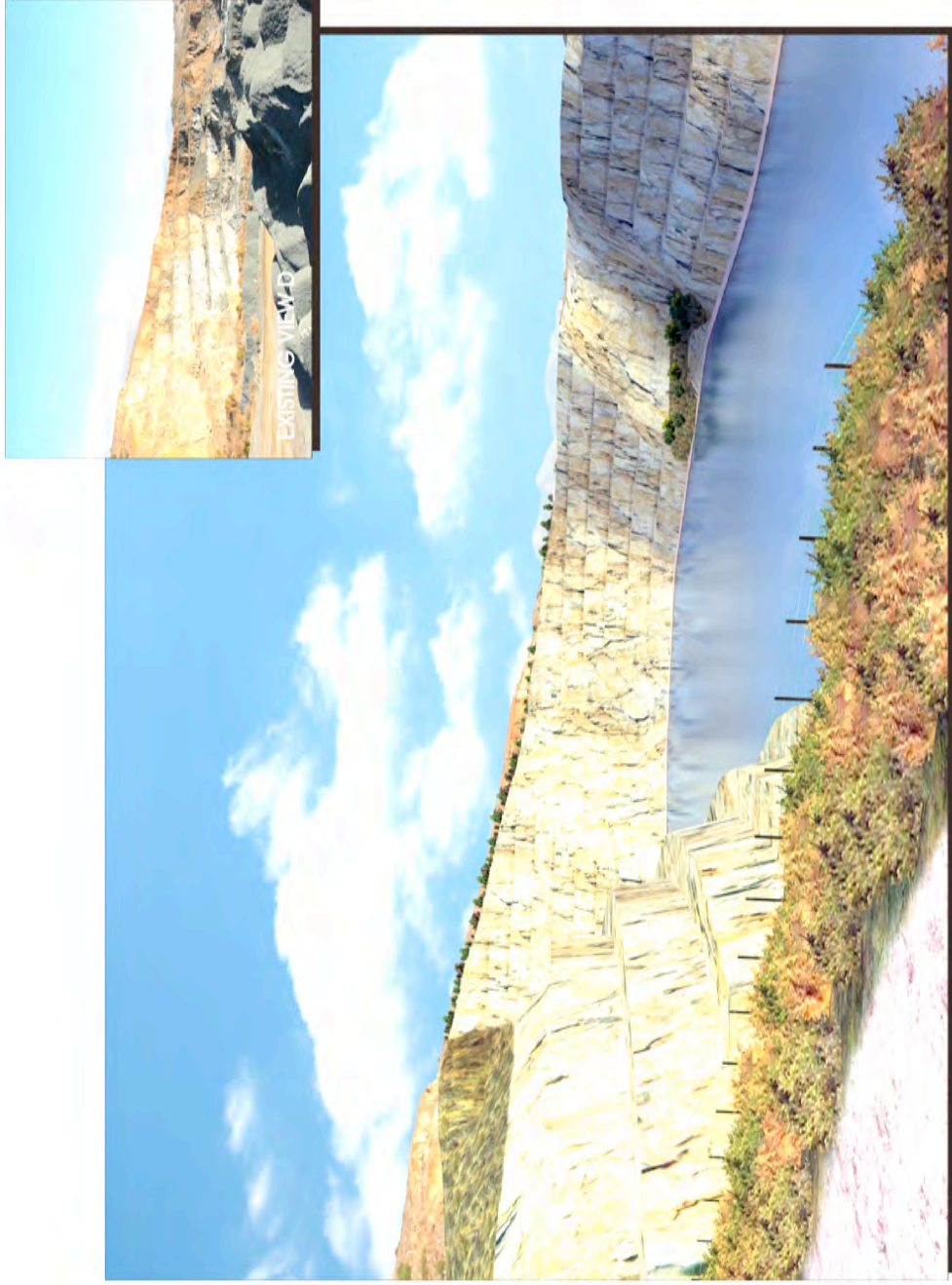


Figure 4.2-5. Photo Simulation D

Proposed reclamation activities to be completed on the Project Site would reclaim what is currently a disturbed mining and resource extraction site to create open space that would include revegetated slopes with mine benches, a depression where groundwater would fill the quarry pit area creating a water body with the appearance of a freshwater lake, vertical cuts in the wall to provide variation in the uniformity of slopes, graded and compacted areas for future urban uses, berm revegetation, and erosion control seeding as needed. The topography of the Project Site, as well as intermittent stockpile locations, operational equipment, and processing plant facilities, limits views within and around the quarry. Following completed reclamation activities, the reclaimed quarry site would be considered an aesthetic enhancement from the baseline condition of disturbed land that has resulted from the mining operations.

As part of final phases of mining and prior to reclamation activities, quarry slopes would be cut at a variety of gradients ranging from a maximum of 2:1 to approximately 8:1 on fill slopes and 1:1 slopes with intermittent near vertical cuts on the quarry sidewalls. This variation in the gradient would reduce the uniformity of the slopes and provide a more natural appearance to the reclaimed quarry walls. Natural rock outcroppings are anticipated in some areas after reclamation, simulating the natural topography of the surrounding landscape. All fill slopes would be covered with native vegetation including sages, grasses, and a variety of native plants selected for erosion control. Plant species that would be used in revegetation are common to the site and surrounding area and are intended to facilitate the project's visual compatibility with the natural landscape following cessation of mining operations.

The proposed project would reclaim the disturbed mining site, creating open space that would include revegetated slopes with mine benches, a groundwater filled quarry pit, berm revegetation, and erosion control seeding as needed. Proposed reclamation procedures including groundwater fill of the quarry pit, fill on outward facing slopes, contour grading, natural rock outcroppings, cut slopes and near vertical cut walls, as well as equipment removal from the site, would ensure a final and long-term improvement in the site's visual character from existing mining activities and land disturbance. Reclamation would additionally soften the appearance of the present stark mining operation through varied slopes and natural vegetation, allowing it to blend with surrounding open space uses of the same or similar vegetation palettes. Completed reclamation would ensure the Project Site maintains a similar visual quality as that of the surrounding landscape. Therefore, impacts to scenic vistas as a result of the proposed project would be considered less than significant.

The intent of the Reclamation Plan Amendment and its subsequent topographic and revegetation efforts is to create a harmonious, integrated, and attractive landscape that recognizes the past quarrying use without emphasizing it as well as blend the perimeter of the quarry into the surrounding natural areas. From a visual quality perspective, it is important to blend both the texture and landform shapes with the color of the native landscape and rock formations to integrate the former quarry into the natural landscape. Vegetation will support this integration and is enhanced beyond the minimal required for revegetation. Reclamation actions developed in the Reclamation Plan Amendment primarily address surface stabilization, revegetation, and aesthetic enhancements, such that the site could be used for future uses as allowed under the City General Plan and Zoning Ordinance.

When mining is complete, the Otay Valley Quarry will primarily be a depression with high sidewalls and a central reservoir. As proposed by the Reclamation Plan Amendment, the sidewalls of the reclaimed quarry would be comprised of the native Santiago Peak volcanic material graded in various configurations: stepped benches, steep rock faces, "rounded contours," and several peak-saddle-peak formations. This variation in



topographic configuration would reduce the highly uniform and engineered appearance of the more traditional terraced quarry sidewalls, reduce any angled edges at the edges of the water body, and help integrate the quarry edges with adjacent land. The reclaimed sidewalls (internal) would range in grade from 1:1 to nearly vertical. Above the natural water line of the depression, areas of fill are proposed to vary the topographic profile, restoring it to a more natural configuration, similar to the peak-saddle-peak topography that existed prior to mining. The resultant rock faces would vary in color based upon their length of exposure to the natural elements, with earlier cuts (top of quarry) having a rusty brown patina (due to oxidation) and later cuts (towards the quarry floor and mostly submerged) displaying the blue-grey color of the unweathered stone. As time passes, this stone would also oxidize and develop the natural rusty brown patina, similar to the stone outcrops found throughout the area. Areas of gentler side slopes would support native plants at the water line of the depression. The Lake Bench Palette (see Tables 3-3 and 3-4 in Section 3.5.4, *Revegetation*) includes riparian species to be planted on these fill areas to more quickly emulate the natural vegetation succession.

The outward-facing fill slopes would comply with the City of Chula Vista grading ordinance and would vary in grade from approximately 2:1 to 8:1, much like the surrounding topography. This topographic variation would substantially reduce the regular appearance of manufactured slopes and help to integrate the former quarry site into the background views from the Otay River Valley open space. Likewise, terraces along the southernmost edge nearest the Otay River present an undulating character and have been configured to mimic the natural contours of the river valley edge. The enhanced planting along these sculpted outward facing fill slopes would further integrate the visual compatibility of the resultant topography. Trees and shrubs, currently found at the perimeters of the Otay River, supplement the erosion control planting. Species such as elderberry, sycamore, and saltbush extend the green and grey-green tones found along the river valley would be utilized to create a cohesive and natural plant palette.

The reclaimed quarry's central depression would have a water surface elevation equalized with the local groundwater table at approximately 85 to 127 feet AMSL. Mining activities will be completed in a manner such that the slopes will convey the majority of all stormwater to the Otay Valley Quarry. The groundwater-filled quarry basin, because of its substantial depth, would have a deeper blue color in the center, and lighter blue to blue-grey colors around the perimeter, depending upon the depth to the first bench below the water surface and the reflections from the sun angles. Active revegetation would occur along the remainder of the Otay Valley Quarry's edges and outward-facing slopes, the larger lake benches, and the relatively level areas near the west and south boundaries. The revegetation is intended to stabilize areas of fill and blend with the adjacent vegetation. Vegetation species mixes are tailored to their specific site location with riparian species nearest the Otay River and mixed coastal sage scrub/grassland at higher elevations, where these plants grow naturally among the abundant Santiago Peak volcanic outcrops of Rock Mountain.

Areas of enhanced revegetation would visually screen parts of the Otay Valley Quarry and add foreground interest. This enhanced tree and shrub canopy, such as coast live and scrub oaks, sumac, toyon, and lemonade berry, would help to integrate the areas of mining with the areas of future development. By creating foreground interest that emulates the natural landscape, the groundwater-filled quarry basin would integrate visually into the viewshed.

The stepped mining benches remaining within the Otay Valley Quarry would not be actively revegetated, as this would not be necessary for stabilization. Placement of vegetation along mined benches would appear as artificial bands in the landscape and would only accentuate the engineered appearance of the quarry.

Additionally, due to the volcanic nature of the subsurface geological structure, successful revegetation of rock benches may not be possible. Instead, it is likely that volunteer plant material would take hold over time, similar to what occurs in a natural environment.

Following implementation of the proposed Reclamation Plan Amendment, the Project Site would be reclaimed as a naturally recharging water body with slopes graded to a more natural appearance than the engineered benched slopes that exist currently. Views from the Otay River Valley and OVRP into the quarry currently include on-going mining operations with trucks traversing the Project Site and mined slopes. After reclamation, views from the Otay River Valley and OVRP into the reclaimed Project Site would include revegetated natural landscape and slopes. Depending on the vantage point, views may include the water body. This revegetated and naturalized view of the reclaimed quarry is in accordance with the long-term vision of the OVRP Concept Plan of Rock Mountain and the quarry being utilized for recreational or open space uses.

State scenic highways are designated by Caltrans and are highways that maintain sensitive landscapes or valuable scenic resources within the highway viewshed. According to the Caltrans State Scenic Highway Program Map, there are no state scenic highways within the Project Site vicinity. The closest State Scenic Highway to the Project Site is SR-75, which is located west of the Project Site and runs from Imperial Beach to Coronado. This highway was designated due to its views of the Pacific Ocean and San Diego Bay to the west. A portion of I-5 located south of SR-75 is considered an “eligible” state scenic highway, but is not officially designated.

Scenic Roadways denoted in the Chula Vista General Plan are located within the Project Site vicinity. Roadways within the project vicinity include Main Street, from I-805 to Heritage Road; Heritage Road, from Telegraph Canyon Road to the City’s southerly boundary; Rock Mountain Road, from Heritage Road to SR-125; and La Media Road, from Otay Lakes Road to Rock Mountain Road. The majority of the proposed project boundary would be located just south of Rock Mountain Road; however as previously discussed, reclamation activities would restore the Project Site to a visually enhanced and compatible state with the surrounding landscape and existing uses.

### **4.2.4 Level of Significance Before Mitigation**

The restoration processes associated with the Reclamation Plan Amendment would result in changes to the aesthetics of the area. These changes would be considered an enhancement from the current baseline condition of on-going mining operations. The cut of quarry slopes would create variation and visual interest. Native vegetation would be used to ensure a similar visual quality as surrounding land uses and would enhance visual harmony with the natural landscape. Visual impacts would be minimized to the extent possible, given the intrusive visual quality of mining sites and would be less than significant.

The Project Site is not located in the vicinity of any scenic highways designated by Caltrans. The project is located within the viewshed of General Plan-designated scenic roadways. Views from applicable roadways would be enhanced by the proposed Reclamation Plan Amendment, as current untreated steep slopes would be replaced by varying slopes planted with vegetation that is consistent and compatible with what is existing in surrounding open spaces naturally. Therefore, impacts to views from a state scenic highway would be less than significant.

Proposed reclamation activities would not include the construction of buildings, structures, or other urban uses that would require lighting or create a new source of glare. Reclamation would restore the currently

disturbed land area and mining operation site to revegetated open space using native plants and grasses. As no land development is proposed, no impacts related to light or glare would occur. Because the project does not propose the installation of a source of light or glare, there are no impacts to day or nighttime views in the area.

### **4.2.5 Mitigation Measures**

No mitigation measures are necessary.

### **4.2.6 Significance of Impacts Following Mitigation Measures**

Impacts associated with landform alteration and aesthetics are less than significant and do not require mitigation.



### 4.3 TRAFFIC, CIRCULATION, AND ACCESS

The discussion in this Section of the EIR presents an analysis of potential traffic impacts based on the *Transportation/Traffic Letter for the Otay Valley Quarry Reclamation Plan*, prepared by Dudek Environmental and dated September 29, 2010. The entire letter is included in Appendix C to this EIR.

#### 4.3.1 Existing Environmental Setting

The Otay Valley Quarry Reclamation Plan Amendment Project Site is located two miles east of I-805 and is bordered on the south by Heritage Road and Wiley Road. Access to the Project Site is provided by Heritage Road where it turns into Wiley Road. There are no improved roadways through the Project Site. Provided below is a general description of the roadways providing access to the Project Site and serving the general project vicinity.

- **I-805:** I-805 is an eight-lane freeway with auxiliary lanes that provides access to the center of the Chula Vista residential and commercial areas. This north-south freeway connects the inland portions of Chula Vista with communities to the north and south. An interchange exists in the project vicinity at Main Street.
- **Main Street:** Main Street is a four-lane major street designed to carry high volumes of traffic and serve to distribute traffic to and from the I-805 freeway system and connecting arterials. Main Street is designed to distribute more localized (rather than regional) trips. Parking is prohibited and bike lanes are provided. The speed limit is posted at 50 mph.
- **Heritage Road:** Heritage Road (which turns in to Wiley Road near the Project Site) is a two-lane local road. This road provides access from Main Street to the Project Site and has a speed limit of 45 mph.

Existing traffic generated on-site is the result of on-going mineral extraction and mining activities. Mining traffic includes large trucks coming and going from the quarry, heavy trucks and earthmovers working within the quarry, and other vehicles necessary for the functioning of the quarry mining operation. An average of 187 daily trips are currently generated by operations at the quarry.

#### 4.3.2 Thresholds of Significance

For purposes of evaluating the project's potential to result in significant effects associated with *Traffic, Circulation, and Access*, this EIR uses the guideline presented in Appendix G of the CEQA Guidelines for Transportation/Traffic as a significance threshold. Specifically, a proposed project has the potential to result in a significant impact associated with *Traffic, Circulation, and Access* if the project would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;

- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency access.

### 4.3.3 Impact Analysis

Traffic generated from reclamation activities and operations would predominantly involve employee trips to and from the gated site entrance, ingress and egress of heavy machinery and equipment traffic, as well as material delivery to the Project Site. The first stage of reclamation would consist of the removal of all equipment and structures including a dozer, front-end wheel loader, portable water pump, motor grader, conveyers and haul trucks. This equipment would be removed, along with stationary structures such as the scale and administration building. This stage would require the use of several flatbed trucks, a crane, a 12-person crew, and two excavators that would be entering and exiting the site periodically during equipment/structure removal. The second stage would consist of rough grading and would require the use of two bulldozers, one front-end loader, four trucks, one water truck, one excavator, one blade, and one ten-person crew that would be entering and exiting the site periodically during grading operations. The third stage would consist of revegetation, which would last approximately four weeks. This stage would require the use of one bulldozer, several flatbed trucks, a hydroseed truck, one front-end loader, and hand-held equipment to be utilized by a 15-person crew. The fourth stage would consist of monitoring and maintenance activities, which would occur over an approximately five-year period. This type of monitoring is usually performed quarterly (seasonally) by one or two biologists. Maintenance in the way of exotics control would be performed monthly for the first six months and quarterly thereafter by a qualified maintenance contractor. Maintenance crews would consist of approximately ten people, depending on the amount of exotics control needed. The various activities associated with implementing the proposed Reclamation Plan Amendment would result in a range of 20 to 30 ADT.

Traffic patterns and volumes generated from proposed reclamation activities would be less than existing conditions associated with current mining operations, and each phase of reclamation would be short-term in nature. Based on approximately 187 ADT associated with current mining operations, the proposed Reclamation Plan Amendment would result in a reduction of 157 to 167 daily trips. Therefore, impacts to traffic would be less than significant.

One primary private access road and gated entrance would be used for machinery and vehicular traffic that would be monitored during reclamation activities. Traffic occurring on this road and associated employee trip generation from public access roads would not exceed any level of service standards. A decrease in daily trips from current baseline conditions would result due to the low volume of trips associated with implementing the Reclamation Plan Amendment. Impacts would be less than significant.

The nearest airport to the Project Site is the Brown Field Municipal Airport, located approximately one mile south of the Project Site in the City of San Diego. The project does not propose any use that would result in a change in air traffic patterns at Brown Field Municipal Airport, as the reclamation activities would not



involve the construction of any structures or present air traffic hazards that would affect Brown Field air traffic patterns. Therefore, the project would have no impact on air traffic patterns.

Reclamation activities would not result in an increase in hazards, as traffic generation due to equipment removal, employee trips, and material deliveries are expected to be less than current baseline conditions. Ingress and egress would be monitored at the site's gated entrance during operation hours, and site access would be restricted to prevent public trespassing or unauthorized use of the site that may be hazardous to the public. Impacts associated with hazardous conditions would be less than significant. The primary access road to and within the Project Site would be maintained for regular ingress and egress, as well as for emergency vehicular access. Additionally, the proposed project would be required to comply with Fire Department requirements and standards to ensure that adequate access is provided. The proposed project would not involve the permanent closure of any surface streets that would increase the response time for emergency services. Emergency access is available by foot and by automobile, and since no new housing or building structures are proposed, the need for emergency services at the Project Site would be low. Therefore, impacts to emergency access would be less than significant.

The Project Site does not propose alternative transportation infrastructure such as bus stops, bicycle routes, or designated public transportation routes. Additionally, reclamation activities would not remove or adversely impact existing alternative transportation features, or result in an increase in demand for such features or facilities. No impacts to alternative transportation policies, plans, or programs would occur.

### **4.3.4 Level of Significance Prior to Mitigation**

As discussed above, impacts to *Traffic, Circulation, and Access* as a result of the proposed project would be less than significant. Therefore, no mitigation measures are necessary.

### **4.3.5 Mitigation Measures**

No mitigation measures are required.

### **4.3.6 Level of Significance after Mitigation**

The proposed project would not result in significant impacts that require mitigation.



## 4.4 NOISE

The evaluation of noise impacts presented in this section is based on the Chula Vista Municipal Code, the Chula Vista General Plan EIR (2005), and the *Otay Valley Quarry Reclamation Plan Aoustical Assessment Report* prepared by Dudek (March 2010). A copy of the *Aoustical Assessment Report* is included in Appendix D to this EIR.

### 4.4.1 Existing Environmental Setting

Noise is generally defined as unwanted sound. Airborne sound is a small scale fluctuation of instantaneous air pressure above and below the local barometric pressure. Sound levels are usually measured and expressed in decibels (dB). Most of the sounds which are heard in the environment do not consist of a single frequency, but rather a mixture of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate sound. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies of a sound in accordance with a weighting system that reflects the decreased sensitivity of human hearing at low frequencies and at extremely high frequencies relative to the mid-range frequencies. This is called “A” weighting and the decibel level measured is called the A-weighted sound level (dBA). In practice, the level of a sound source is conveniently measured using a sound level meter that includes a filter corresponding to the dBA curve. Any further reference to decibels written as “dB” should be understood to be A-weighted.

Although the A-weighted sound level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a mixture of noises from distant sources which create a relatively steady background noise in which no particular source is identifiable, often with a variable local signal superimposed upon the background. To describe the time-varying character of environmental noise, the statistical noise descriptors L10, L50, and L90 are commonly used. They are the noise levels equaled or exceeded during 10 percent, 50 percent, and 90 percent of a stated period of time. A single descriptor called the equivalent sound level (LEQ) is also used. LEQ is the energy mean A-weighted sound level during a stated measured time interval.

The State of California has developed a land use compatibility matrix relative to accept noise levels. The City of Chula Vista follows the noise guidelines established by the State. The matrix defines noise/land use compatibility by using a noise descriptor that incorporates the varying noise sensitivity of people during a 24-hour period. The descriptor used for such evaluation is called the day-night level (LDN), or the community noise equivalent level (CNEL). LDN is the weighted average sound level for a 24-hour day. It is calculated by adding a 10 decibel penalty to sound levels at night (10 p.m. to 7 a.m.). CNEL further incorporates a 5 decibel penalty from 7 p.m. to 10 p.m. In practice, LDN and CNEL are almost identical and can usually be used interchangeably.

Noise on-site is currently generated from on-going mining operations. Sources of noise include heavy trucks and machinery and vehicular traffic within the quarry. Additionally, loud bursts of noise from periodic rock blasts are a part of regular mining activities.

### Regulatory Background

Noise criteria for the City of Chula Vista are identified in the City’s Noise Control Ordinance (Chula Vista Municipal Code, Chapter 19.68). According to the ordinance, the City of Chula Vista has adopted the

National Goals for Noise Reduction as set forth by the U.S. Environmental Protection Agency (EPA) for their noise regulatory criteria. Additionally, the City of Chula Vista has outlined noise standards for land use compatibility in both the City's Municipal Code and General Plan update. These standards are shown in Table 4.4-1, *Exterior Land Use/Noise Compatibility Guidelines*.

**4.4-1. Exterior Land Use/Noise Compatibility Guidelines**

Land Use	Annual CNEL <sup>1</sup> in Decibels					
	50	55	60	65	70	75
Residential						
Schools, Libraries, Daycare Facilities, Convalescent Homes, Outdoor Use Areas, and Other Similar Uses Considered Noise Sensitive						
Neighborhood Parks, Playgrounds						
Community Parks, Athletic Fields						
Office and Professional						
Places of Worship (Excluding outdoor use areas)						
Retail and Wholesale Commercial, Restaurants, Movie Theatres						
Industrial, Manufacturing						

<sup>1</sup> The CNEL is a 24-hour A-weighted decibel average sound level [dB(A) LEQ] from midnight to midnight obtained after the addition of 5 dB to sound levels occurring between 7:00 p.m. and 10:00 p.m. and 10 dB to the sound levels occurring between 10:00 p.m. and 7:00 a.m. A-weighting is a frequency correction that often correlates well with the subjective response of humans to noise. Adding 5 dB and 10 dB to the evening and nighttime hours accounts for the added sensitivity of humans to noise during these time periods.

Source: City of Chula Vista General Plan Update 2005

### Construction Activities

Construction activities must comply with the hours set by the City of Chula Vista Municipal Code. Section 17.24.040(c)(8) states that, in regard to power machinery, tools, and equipment, the following activities (among others) are declared to cause disturbing, excessive, offensive, or unreasonable noises in violation of this section and therefore constitute a public nuisance:

*The use of any tools, power machinery, or equipment or the conduct of construction and building work in residential zones so as to cause noises disturbing to the peace, comfort, and quiet enjoyment of property of any person residing or working in the vicinity between the hours of 10:00 p.m. and 7:00 a.m., Monday through Friday, and between the hours of 10:00 p.m. and 8:00 a.m., Saturday and Sunday, except when the work is necessary for emergency repairs for the health and safety of any member of the community.*

Therefore, construction is allowed only between the hours of 7:00 a.m. and 10:00 p.m., Monday through Friday, and between the hours of 8:00 a.m. and 10:00 p.m., Saturday and Sunday. Pursuant to Section 19.68.030(2) of the Municipal Code, construction noise is exempt from noise standards. Reclamation activities are considered by the City to be construction noise and not environmental noise.

Exterior noise is also limited by the City's noise ordinance. Section 19.68.030 states:

*No person shall operate, or cause to be operated, any source of sound at any location within the city or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level to exceed the environmental and/or nuisance interpretation of the applicable limits given in Table III of Section 19.68.030 (a)(4).*

Table 4.4-2, *Exterior Noise Limits*, summarizes the exterior noise limits as described in Table III of Section 19.68.030(a)(4) of the Chula Vista Municipal Code. Where two or more dissimilar land uses occur on a single property, the more restrictive limits apply.

**4.4-2. Exterior Noise Limits**

Receiving Land Use Category	Noise Level [dB(A)]	
	10:00 p.m. to 7:00 a.m. (Weekdays) 10:00 p.m. to 8:00 a.m. (Weekends)	7:00 a.m. to 10:00 p.m. (Weekdays) 8:00 a.m. to 10:00 p.m. (Weekends)
All residential (except multiple dwelling)	45	55
Multiple dwelling residential	50	60
Commercial	60	65
Light industry – I-R and I-L zone	70	70
Heavy industry – I zone	80	80

Source: City of Chula Vista General Plan Update 2005

### **Existing Noise Sources**

Existing noise sources in the project area include on-site rock quarry blasting and excavation activities, aircraft noise associated with Brown Field Municipal Airport, and occasional music from Cricket Wireless Amphitheater. Additionally, existing sources of noise include the various pieces of heavy machinery and equipment necessary for mineral extraction and processing. Based on noise measurements conducted in the vicinity of the site, existing daytime average noise levels along the perimeter of the site generally range from approximately 45 dB to 55 dB (Dudek 2008). Currently, mining is concentrated in the central portion of the quarry. As mining continues and moves outward, noise levels along the perimeter will increase.

### **Brown Field Municipal Airport**

The Brown Field Municipal Airport is located approximately one mile south of the Project Site. The airport serves as a general aviation airport and is the port-of-entry for private aircraft coming into the United States through Mexico. The airport has an 8,000-foot-long and 150-foot-wide runway which can accommodate most aircraft, as well as a smaller runway. In 2008, the airport operated 109,882 flights (Brown Field Master Plan Update 2009).

The adopted Brown Field Airport Land Use Compatibility Plan (ALUCP) established the Airport Influence Area (AIA) for Brown Field Airport. The AIA indicates the area in which current or future airport related noise, overflight, safety, and/or airspace protection factors may affect land use or necessitate restrictions on those uses. The Brown Field AIA encompasses a limited area of the East Planning Area. Of the limited area covered by the Brown Field AIA, an even smaller portion of the East Planning Area is within the 60 dB CNEL and 65 dB CNEL contours. The relatively small area covered by the 60 dB CNEL noise contour extends north from the airport to just above Rock Mountain, and thus encompasses the proposed Project Site.

### **4.4.2 Threshold of Significance**

In accordance with noise significance criteria established by Appendix G of the State CEQA Guidelines and the City of Chula Vista, a significant impact could occur if the project would:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies;
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- Expose people residing or working in the project area to excessive noise levels for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport; or
- Expose people residing or working in the project area to excessive noise levels for a project within the vicinity of a private airstrip.

#### **4.4.3 Impact Analysis**

The Chula Vista Noise Ordinance and the Chula Vista General Plan (2005) set exterior noise limits and CNEL standards for a variety of land uses. The Project Site is zoned as “P-C Planned Community,” which provides for uses including commercial, industrial, residential, recreational, and open space. These uses allow for daytime noise limits ranging from 55 dB to 80 dB. Currently, daytime average noise levels along the perimeter of the Project Site range from approximately 45 dB to 55 dB (Dudek 2010). Currently, mining is concentrated in the central portion of the quarry. As mining continues and moves outward, noise levels along the perimeter will increase. Ambient noise levels are likely to be substantially reduced upon completion of proposed reclamation activities, resulting in permanent noise levels below noise limits established in the City’s Noise Ordinance and General Plan. Therefore, impacts would be less than significant.

Groundborne vibration and noise levels are typically felt or heard over small distances from the point of origin. Reclamation activities would involve earthwork to produce finish grades, resulting in temporary groundborne vibration and noise levels. The proposed project would not require the use of any heavy equipment that is not currently used on-site for mining operations, and no blasting would be required for reclamation activities. Therefore, vibration and noise levels would be substantially less than current levels. Consequently, and because construction-related groundborne noise is considered temporary, impacts would be less than significant.

The proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing currently. Rather, ambient noise levels would be substantially reduced as compared to existing ambient noise levels, due to the elimination of mining activities at the site. Noise levels prior to the implementation of the Reclamation Plan Amendment are associated with mining operations at Otay Valley Quarry. Noise generated by the quarry operations includes heavy equipment operation for the extraction of mineral resources, as well as blasting. The proposed project would establish the site largely as vegetated open land, with areas of graded and compacted land. Noise levels would be substantially reduced from those associated with mining operations and impacts would be less than significant.

The project would generate short-term construction noise. The operation of heavy equipment for reclamation purposes would generate noise, but not in excess of the noise currently generated by on-going



mining at the Project Site and would occur for short durations. Equipment used would vary by construction phase, but could include several flatbed trucks, a crane, excavators, bulldozers, a front-end loader, a water truck, a blade, and hand-held equipment. It is difficult to quantify the exact increase in ambient noise levels due to construction because of the many variables involved, including size of equipment used, percentage of time equipment is used, and number of pieces of equipment in operation at any given time. However, maximum noise levels for the type of equipment normally used in a project such as this range from approximately 75 dB to 90 dB (at a 50-foot distance). Typical operating cycles may involve two minutes of full power, followed by three or four minutes at lower levels.

The majority of noise-generating equipment would be removed from the site following the first stage of the proposed project. A crane, two bulldozers, one front-end loader, and two excavators would remain for the subsequent stages of the reclamation project. Removal of the majority of noise-generating equipment would substantially lower the ambient noise level. In addition, noise from reclamation activities would be short-term and periodic. Equipment removal and rough grading would last for approximately seven weeks, after which most heavy equipment would be removed from the site. Equipment use after the first seven weeks would be associated with revegetation and maintenance/monitoring activities, and would utilize equipment which would generate little or no discernable noise.

Assuming build-out of the City's General Plan, noise sensitive receptors would include off-site residents located north of the Project Site. The closest residential property would be located approximately 80 feet or more from the Project Site perimeter. Construction noise is attenuated by approximately six dB for every doubling of distance. Based on the anticipated construction equipment and distance to the closest residential properties, construction noise is anticipated to generate maximum noise levels of approximately up to 85 dB at the adjacent residential properties. This noise level could intermittently occur for a few days when construction equipment is operating immediately adjacent to the residential properties. The remainder of the time, the construction noise level would be much less, due to the equipment being operated further away from the Project Site perimeter and potential existing residences. Construction activities would be conducted within the City's allowable hours and days of operation, as outlined in the City's Noise Ordinance. Construction activities would be short-term and would not adversely affect any existing or future receptors during reclamation. Thus, construction noise from the Project Site would result in a less than significant noise impact. Upon completion of revegetation activities, no new sources of noise would occur, other than seasonal maintenance and monitoring, which would have a negligible contribution to ambient noise levels.

Construction traffic generated from reclamation activities and operations would consist predominantly of employee trips to and from the gated site entrance, ingress and egress of heavy machinery and equipment traffic, as well as material delivery to the Project Site. Traffic volumes generated from proposed reclamation activities would be less than existing conditions associated with current mining operations, and each stage of reclamation would be short-term in nature. Therefore, noise impacts associated with the construction traffic would be less than significant.

The proposed Project Site is located approximately one mile north of Brown Field Municipal Airport and is encompassed by the Airport Influence Area and the 60 dB CNEL noise contour. The proposed project would reduce noise levels after completion of construction associated with reclamation activities and would not result in the exposure of people to excessive noise levels as a result of project implementation. Impacts would be less than significant.

The proposed project is not located within the vicinity of a private airstrip. Consequently, no impacts would result.

Noise impacts related to the project's adjacency to the MSCP Preserve are addressed in Section 4.6, *Biological Resources*. As addressed in Section 4.6, the proposed project has the potential to result in indirect noise impacts to the adjacent MSCP Preserve, although such impacts would be substantially less than those that occur under existing conditions. Mitigation measure BIO-1 would be implemented to ensure that indirect noise impacts on the adjacent MSCP Preserve are reduced to below a level of significance.

### **4.4.4 Level of Significance Before Mitigation**

Noise generated from the project would not cause significant noise impacts.

### **4.4.5 Mitigation Measures**

Mitigation measure BIO-1 is required to mitigate indirect noise impacts to the MSCP Preserve to below a level of significance. (See Section 4.6, *Biological Resources*.) No other mitigations are necessary.

### **4.4.6 Level of Significance After Mitigation**

With the exception of indirect impacts to the adjacent MSCP Preserve, impacts associated with Noise are less than significant and do not require mitigation. Indirect impacts to the adjacent MSCP Preserve would be mitigated to below a level of significance with the incorporation of mitigations measures presented in Section 4.6, *Biological Resources*.

## 4.5 AIR QUALITY

This section of the EIR is based on the *Air Quality Technical Report* prepared for the proposed project by Dudek Inc, dated January 2011. A copy of the *Air Quality Technical Report* is included as Appendix E to this EIR.

### 4.5.1 Existing Conditions

The Otay Valley Quarry is the site of an existing resource mining operation. Resource extraction involves the use of heavy machinery to extract, transport, and process raw minerals, as well as blasting. Raw materials are transported throughout the site using heavy trucks. Additionally, trucks hauling materials from the site are present. These factors of regular operation comprise the primary sources of air quality degradation.

#### ***Climate and Topography***

The weather of the Project Site, as with most of Southern California (due to the influence of the Pacific Ocean and its semi permanent high-pressure systems), consists of dry, warm summers and occasionally wet, mild winters. The average temperature year-round ranges from the mid 40s to high 90s (degrees in Fahrenheit). The average precipitation for the project area is ten inches, with most of the precipitation falling from November to April.

The topography of the general project region includes beaches on the west, and mountains and desert to the east. These landforms, along with local meteorology, influence the dispersal and movement of pollutants. The mountains prohibit the dispersal of pollutants, which contributes to the pollutants being trapped in inversion layers.

The interaction of ocean, land, and the Pacific High Pressure Zone creates mostly clear skies and westerly to northwesterly winds year-round. The winds tend to blow inland through the valleys during the day and westward, down the hills and through the valleys, at night.

#### ***Air Quality***

The nearest air quality measurements to the Project Site are made in downtown Chula Vista by the San Diego County Air Pollution Control District (SDAPCD), the agency responsible for air quality planning, monitoring, and enforcement in the San Diego Air Basin (SDAB). Table 4.5-1, *Ambient Air Quality Standards*, gives the California and Federal standards for air quality, while Table 4.5-2, *Ambient Air Quality Data*, summarizes published monitoring data from the Chula Vista (80 East J Street) station for the years 2006-2008.

As shown by Table 4.5-2, there is still progress to be made towards cleaner air in Chula Vista. The State one-hour and eight-hour ozone standards were exceeded in 2007 and 2008. The State annual and 24-hour PM<sub>10</sub> standards were exceeded in 2006, 2007, and 2008. The State annual PM<sub>2.5</sub> standards were exceeded in 2008, and the 24-hour PM<sub>2.5</sub> standards were exceeded in 2007. Air quality within the project region is in compliance with both California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS) for NO<sub>2</sub>, CO, and SO<sub>2</sub>.

**Table 4.5-1. Ambient Air Quality Standards**

Pollutant	Average Time	California Standards	National Standards	
		Concentration	Primary	Secondary
O <sub>3</sub>	1 hour	0.09 ppm (180 µg/m <sup>3</sup> )	—	Same as Primary Standard
	8 hour	0.070 ppm (137 µg/m <sup>3</sup> )	0.075 ppm (147 µg/m <sup>3</sup> )	
CO	8 hours	9.0 ppm (10 µg/m <sup>3</sup> )	9 ppm (10 µg/m <sup>3</sup> )	None
	1 hour	20 ppm (23 µg/m <sup>3</sup> )	35 ppm (40 µg/m <sup>3</sup> )	
NO <sub>2</sub>	Annual Arithmetic Mean	0.030 ppm (57 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )	Same as Primary Standard
	1 hour	0.18 ppm (339 µg/m <sup>3</sup> )	—	
SO <sub>2</sub>	Annual Arithmetic Mean	—	0.030 ppm (80 µg/m <sup>3</sup> )	—
	24 hours	0.04 ppm (105 µg/m <sup>3</sup> )	0.14 ppm (365 µg/m <sup>3</sup> )	—
	3 hours	—	—	0.5 ppm (1300 µg/m <sup>3</sup> )
	1 hour	0.25 ppm (655 µg/m <sup>3</sup> )	—	—
PM <sub>10</sub>	24 hours	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	—	
PM <sub>2.5</sub>	24 hours	No Separate State Standard	35 µg/m <sup>3</sup>	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	15.0 µg/m <sup>3</sup>	
Lead	30-day Average	1.5 µg/m <sup>3</sup>	—	—
	Calendar Quarter	—	1.5 µg/m <sup>3</sup>	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m <sup>3</sup>	
Hydrogen sulphide	1 hour	0.03 ppm	—	—
Vinyl chloride	24 hours	0.01 ppm	—	—
Sulfates	24 hours	25 µg/m <sup>3</sup>	—	—
Visibility reducing particles	8 hours	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%	—	—

Source: Dudek Air Quality Technical Report (January 2011).

**Table 4.5-2. Ambient Air Quality Data**

Pollutant	Averaging Time	2006	2007	2008	Most Stringent Ambient Air Quality Standard	Monitoring Station
O <sub>3</sub>	8 hour	0.069	0.087	0.084	0.070	Chula Vista
	1 hour	0.084	0.105	0.107	0.090	
PM <sub>10</sub>	Annual	26.3 µg/m <sup>3</sup>	26.1 µg/m <sup>3</sup>	26.7 µg/m <sup>3</sup>	20 µg/m <sup>3</sup>	Chula Vista
	24 hour	52.0 µg/m <sup>3</sup>	58.0 µg/m <sup>3</sup>	54.0 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	
PM <sub>2.5</sub>	Annual	11.2 µg/m <sup>3</sup>	N/A	12.3 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	Chula Vista
	24 hour	30.2 µg/m <sup>3</sup>	77.8 µg/m <sup>3</sup>	32.9 µg/m <sup>3</sup>	35 µg/m <sup>3</sup>	
NO <sub>2</sub>	Annual	0.017	0.015	0.015	0.030	Chula Vista
	1 hour	0.074	0.082	0.072	0.180	
CO	8 hour	2.20	2.24	1.87	9.0	Chula Vista
	1 hour*	2.7	3.1	2.0	20	
SO <sub>2</sub>	Annual	0.003	0.002	0.002	0.030	Chula Vista
	24 hour	0.006	0.004	0.004	0.040	

Source: Dudek Air Quality Technical Report (January 2011).

## **Regulatory Setting**

### **Federal**

The Federal Clean Air Act (CAA), passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the CAA, including the setting of NAAQS for major air pollutants, hazardous air pollutant standards, approval of State attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric O<sub>3</sub> protection, and enforcement provisions. NAAQS are established for "criteria pollutants" under the CAA, which are O<sub>3</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and Pb.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are based on statistical calculations over one- to three-year periods, depending on the pollutant. The CAA requires the EPA to reassess the NAAQS at least every five years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a State Implementation Plan that demonstrates how those areas will attain the standards within mandated time frames.

### **State**

The Federal CAA delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to the California Air Resources Board (CARB), with subsidiary responsibilities assigned to air quality management districts (AQMDs) and air pollution control districts (APCDs) at the regional and county levels. CARB, which became part of the California Environmental Protection Agency (CalEPA) in 1991, is

responsible for ensuring implementation of the California Clean Air Act (CCAA) of 1988, responding to the Federal CAA, and regulating emissions from motor vehicles and consumer products.

CARB has established CAAQS, which are more restrictive than the NAAQS, consistent with the CAA, which requires state regulations to be at least as restrictive as the federal requirements. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. The CAAQS for O<sub>3</sub>, CO, SO<sub>2</sub> (one-hour and 24-hour), NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 4.5-1, *Ambient Air Quality Standards*.

### **Local**

While CARB is responsible for the regulation of mobile emission sources within the State, local AQMDs and APCDs are responsible for enforcing standards and regulating stationary sources. The project is located within the SDAB and is subject to SDAPCD and South Coast Air Quality Management District (SCAQMD) guidelines and regulations. In San Diego County, ozone and particulate matter are the pollutants of main concern, since those pollutants are found to be in excess of State ambient air quality standards in most years. For this reason, the SDAB has been designated as a nonattainment area for the State PM<sub>10</sub>, PM<sub>2.5</sub>, and ozone standards. The SDAB is also a federal ozone nonattainment area and a carbon monoxide maintenance area.

An area is designated in attainment when it is in compliance with the NAAQS and/or CAAQS. These standards are set by the EPA or CARB for the maximum level of a given air pollutant which can exist in the outdoor air without unacceptable effects on human health or the public welfare. The SDAB is designated Subpart I nonattainment for the 8-hour NAAQS for O<sub>3</sub>. The SDAB was designated in attainment for all other criteria pollutants under the NAAQS with the exception of PM<sub>10</sub>, which was determined to be unclassifiable. The SDAB is currently designated nonattainment for O<sub>3</sub>, both 1-hour and 8-hour, and particulate matter, PM<sub>10</sub> and PM<sub>2.5</sub> under the CAAQS. It is designated attainment for CO, NO<sub>2</sub>, SO<sub>2</sub>, lead, and sulfates.

The criteria pollutants of primary concern that are considered in the Air Quality Technical Report prepared for the project include O<sub>3</sub>, NO<sub>2</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. Although there are no ambient standards for VOCs or NO<sub>x</sub>, they are important as precursors to O<sub>3</sub>. Table 4.5-3, *SDAB Attainment Classification*, summarizes San Diego County's Federal and State attainment designations for each of the criteria pollutants.



**Table 4.5-3. SDAB Attainment Classification**

Pollutant	Federal Designation	State Designation
Ozone (1 hour)	Attainment*	Nonattainment
Ozone (8 hour)	Nonattainment (Subpart I)	Nonattainment
Carbon Monoxide	Attainment (Maintenance Area)	Attainment
PM <sub>10</sub>	Unclassifiable**	Nonattainment
PM <sub>2.5</sub>	Attainment	Nonattainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(no federal standard)	Attainment
Hydrogen Sulfide	(no federal standard)	Unclassified
Vinyl Chloride	(no federal standard)	Unclassified
Visibility Reducing Particles	(no federal standard)	Unclassified

\* The Federal 1-hour standard of 0.12 ppm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.

\*\* At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

Source: Dudek Air Quality Technical Report (March 2010).

### 4.5.2 Thresholds of Significance

Appendix G of the CEQA guidelines defines a potentially significant air quality impact as one that would:

- Conflict with or obstruct the implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O<sub>3</sub> precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

#### Project Pollutants

The City of Chula Vista evaluates project emissions based on the quantitative emission thresholds established by the SCAQMD in their CEQA Air Quality Handbook (SCAQMD 1993). The SCAQMD sets forth quantitative emission significance thresholds below which a project would not have a significant impact on ambient air quality. Project-related air quality impacts estimated in this environmental analysis would be considered significant, if any of the applicable significance thresholds presented in Table 4.5-4, *SCAQMD Air Quality Significance Thresholds*, are exceeded.

**Table 4.5-4. SCAQMD Air Quality Significance Thresholds**

Pollutant	Construction	Operation
Criteria Pollutants Mass Daily Thresholds		
VOC	75 lbs/day	55 lbs/day
NO <sub>x</sub>	100 lbs/day	55 lbs/day
CO	550 lbs/day	550 lbs/day
SO <sub>x</sub>	150 lbs/day	150 lbs/day
PM <sub>10</sub>	150 lbs/day	150 lbs/day
PM <sub>2.5</sub>	55 lbs/day	55 lbs/day

The thresholds listed in Table 4.5-4 represent screening-level thresholds that can be used to evaluate whether project-related emissions could cause a significant impact on air quality. Emissions below the screening-level thresholds would not cause a significant impact. In the event that emissions exceed these thresholds, modeling would be required to demonstrate that the project's total air quality impacts result in ground-level concentrations that are below the CAAQS and NAAQS, including appropriate background levels. For nonattainment pollutants, if emissions exceed the thresholds shown in Table 4.5-4, the project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality.

SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person. A project that proposes a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

### 4.5.3 Impact Analysis

The proposed project would result in fewer impacts to air quality than what occurs with the on-going mining operations. Although episodic impacts to air quality would be present during reclamation (see below), these would be short in duration in comparison to current site conditions. Additionally, reclamation would leave the Project Site as revegetated open space and a naturally-recharging water body; these uses do not have the air quality impacts that are associated with an active mining operation. Revegetation would have an overall beneficial impact on the site's air quality, as plant material acts to naturally clean air and filter emissions and therefore improve air quality.

The proposed Otay Valley Quarry Reclamation Plan Amendment project would impact air quality almost exclusively through respirable particulate matter (PM<sub>10</sub>). Secondary project-related atmospheric impacts derive from a number of other small, growth-connected emissions sources such as temporary emissions of dusts and fumes during project construction; increased fossil-fuel combustion in power plants from project electricity requirements; evaporative emissions at gas stations or from paints, thinners, or solvents used in construction and maintenance; increased air travel from area visitors; dust from tire wear and re-suspended roadway dust; etc. All these emission points are either temporary, or they are so small in comparison to project-related automotive sources such that their impact is less important. However, growth is associated with increased air pollution emissions from a wide variety of sources, which further inhibits the near-term attainment of all clean air standards in the SDAB.

The Project Site is located in San Diego County, within the SDAB, which is governed by the SDAPCD. The SDAPCD regulates air quality over most types of stationary emission sources through its permit authority, as well as planning and enforcement activities. SDAPCD's air quality plan describes air pollution control strategies that are to be implemented by region's classified as nonattainment areas. The purpose of the plan and strategies is to eventually bring the area into compliance with Federal and State requirements, classifying it as an attainment area.

The proposed project is not anticipated to violate, or increase violation of, air quality standards or exceed emission thresholds, and is thus would not conflict with the SDAPCD's air quality plan. The project would be short-term and, following the construction phase, would not result in any emissions. Impacts would be less than significant.

### **Construction Emissions**

Construction of the proposed project would result in a temporary addition of pollutants to the SDAB, caused by soil disturbance, dust emissions, and combustion pollutants from on-site construction equipment and off-site trucks hauling construction materials. Construction emissions would vary daily, depending on the level of activity, the specific type of operation, and, for dust, the current weather conditions. Therefore, such emission levels can only be estimated. Grading and site preparation activities would primarily cause fugitive dust emissions, while use of construction equipment and motor vehicles would result in NO<sub>x</sub> and CO emissions.

Emissions from the construction phase of the project were estimated through the use of emission factors from the URBEMIS 2007, Version 9.2.4, land use and air emissions model (Rimpo and Associates 2007). For the purposes of modeling, it was assumed that the proposed project would commence in December 2039 (model does not go beyond 2040). The duration of construction in each stage of the project is as listed below:

- equipment removal (three weeks)
- rough grading (four weeks)
- revegetation (four weeks)
- monitoring and maintenance (intermittent over a three to five year period).

Emissions associated with the monitoring and maintenance stage were not modeled due to the fact that activities would only occur on a seasonal basis and would not require a significant amount of equipment. For the analysis, it was assumed that heavy construction equipment would be operating on-site for approximately eight hours per day, five days per week (22 days per month), during project construction. Additional details of the construction schedule are included in Appendix E (the *Air Quality Technical Report*). The equipment mix anticipated for construction activity was based on typical construction practices.

The proposed project is subject to SDAPCD Rule 52 – Particulate Matter. This requires the project to take reasonable steps to limit emissions of fugitive dust beyond the property line. Compliance with Rule 52 would limit any PM<sub>10</sub> that may be generated during reclamation activities. When dust control and mitigation measures were factored into the calculations (it was assumed that the active sites would be watered at least three times daily), the result was an approximately 61 percent reduction of particulate matter.

Table 4.5-5, *Estimated Daily Maximum Construction Emissions*, shows the estimated maximum daily construction emissions associated with the construction phase of the proposed project.

**Table 4.5-5. Estimated Daily Maximum Construction Emissions**

	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Proposed Project Emissions	3.95	27.81	19.34	0.00	24.57	5.96
Pollutant Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Source: URBEMIS 2007 Version 9.2.4. See Air Quality Technical Report Appendix A for complete results.

As shown above, daily construction emissions of VOC, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, or PM<sub>2.5</sub> would not exceed the acceptable thresholds. Consequently, construction of the proposed project would result in a less than significant impact.

### **Operation-Related Emissions**

The proposed project would not result in any long-term (operational) impacts to air quality. As a result, operation-related impacts would be less than significant.

The proposed project would convert a site that is currently used for heavy mining to a site consisting of vegetated open space and graded and compacted areas suitable for urban uses. Project-related emissions during reclamation activities would be below significance thresholds for all criteria pollutants. Following construction of the proposed project, no long-term air quality emissions would occur.

### **Cumulative Impacts**

The operation of heavy equipment for reclamation purposes would generate emissions, but the emissions would be less than those currently generated by mining operations. Emissions from the project area would be reduced during reclamation activities, and even further reduced after the completion of reclamation activities, as compared to existing emission levels. Therefore, the project would not result in a cumulatively considerable net increase of any criteria pollutant. Impacts would be less than significant.

### **Sensitive Receptors**

Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. Certain land uses are considered more sensitive to changes in air quality than others, depending on the inhabiting population and activities involved. People most likely to be affected by air pollution, as identified by the CARB, include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Concentrations of pollutants in excess of the defined thresholds are of increased concern for areas (deemed sensitive receptors) where these groups may be located, which include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. In the project area currently, reduced visibility, eye irritation, and adverse health impacts are the most serious existing air quality hazards.

There are currently no sensitive receptors in the vicinity of the Project Site. The nearest residences are located approximately 4,500 feet or more to the southwest of the site. Reclamation activities are anticipated to begin in 2089; therefore, it is difficult to determine future land use patterns in the project vicinity.

Assuming buildout of Otay Ranch Village Four, as planned for in the current Chula Vista General Plan, residential uses would be located directly north of the Project Site.

The project would not require the extensive use of heavy-duty construction equipment, and the construction period would be short-term, after which project-related emissions of toxic air contaminants (TACs) would cease. Thus, the proposed project would not result in a long-term source of TAC emissions. No residual TAC emissions and corresponding cancer risk are anticipated after construction. Furthermore, as discussed earlier, construction equipment emissions would not exceed any established significance thresholds. As such, the exposure of project-related TAC emission impacts to sensitive receptors both during and after construction would be less than significant.

### **Odors**

During the construction period, potential odors could result from the fumes associated with the use of construction equipment. The proposed project would consist of typical construction activities using limited amounts of equipment, and would be of short and intermittent duration. Due to the short-term nature of construction, impacts resulting from people's potential exposure to objectionable odors that could be considered objectionable would be temporary; impacts would be less than significant.

### **4.5.4 Level of Significance Before Mitigation**

Emissions are currently generated from on-site resource extraction as a result of heavy equipment use and blasting. Emissions due to on-going mining are long-term and pervasive, and continue over the life of mining. In contrast, after reclamation, the proposed project would produce virtually no emissions, as the Project Site would be left as vacant reclaimed land.

Emissions generated from reclamation would not cause any significant air quality impacts. Emissions due to construction would be short-term and would not violate any air quality regulations or standards. Air quality impacts due to operations of the project following implementation of the proposed Reclamation Plan Amendment would not occur. The project would not create cumulatively significant air quality impacts, would not affect sensitive receptors, and would not create objectionable odors. No mitigation measures are required.

### **4.5.5 Mitigation Measures**

The project would not result in significant air quality impacts. No mitigation is required.

### **4.5.6 Level of Significance After Mitigation**

Impacts associated with air quality would not be significant and would not required mitigation.





## 4.6 BIOLOGICAL RESOURCES

This section is summarized from the *Biological Resources and Impacts Analysis* letter prepared by Dudek, Inc., dated February 2011. Regional biological resources information and biological studies previously conducted in the project vicinity were reviewed to ensure full understanding and disclosure of project impacts. In addition, general sources and regulations, put forth by such agencies as the U.S. Fish and Wildlife Service and the California Department of Fish and Game, were inspected to identify potentially occurring sensitive species and habitats. Finally, vegetation mapping (including a delineation of wetlands and non-wetland waters) and focused surveys for special-status plant and animal species were conducted as part of the *Otay Valley Quarry Biological Resources and Impacts Analysis*. The impacts are analyzed in accordance with CEQA and the City of Chula Vista Final MSCP Subarea Plan. A complete copy of the *Biological Resources and Impacts Analysis* report is included in Appendix F to this EIR.

### 4.6.1 Existing Environmental Setting

The approximately 278-acre Project Site, approximately 197 acres of which is occupied by the Project Site's mine operations and processing areas and would be reclaimed pursuant to the proposed Reclamation Plan Amendment, is located in the City of Chula Vista, San Diego County, California. The site is within the City's MSCP Subarea Plan and is associated with the San Diego County MSCP Subregional Plan, which is a blueprint for the conservation of habitats and the preservation of natural vegetation communities in San Diego County. Current City zoning of the property is "P-C Planned Community," which provides for a variety of urban uses, including commercial, industrial, residential, recreational, and open space (as approved through the Chula Vista General Plan). The existing land use over the property is mining and undeveloped mineral reserve, bordered by open space/preserve land uses; further to the south are industrial land uses; to the west are commercial, industrial, and entertainment uses; and to the north are residential uses. Although portions of the quarry are identified as a "Minor Amendment Area," the quarry itself is not designated as preserve by the MSCP, but is adjacent to Preserve lands.

The Project Site is the current location of an on-going mining and processing operation. The 197-acre area to be reclaimed will have been completely mined prior to reclamation. As such, the quarry is devoid of any naturally occurring biological resources. The quarry has a vested right to continue mining until resources are depleted (approximately 2089). The area being reclaimed is completely outside the MSCP Preserve boundary. As full mining is realized, sensitive resources will remain unaffected.

### Habitat

Within the project area but outside of areas proposed for reclamation under the Reclamation Plan Amendment, there are sensitive vegetation communities. Each of these, as defined by the US Fish and Wildlife Service (USFWS), the Army Corps of Engineers (ACOE), California Department of Fish and Game (CDFG), Regional Water Quality Control Board (RWQCB), and/or the City of Chula Vista, is described below. There are no sensitive vegetation communities, wetlands areas, special-status plants, and wildlife and wildlife corridors within the Project Site. Figure 4.6-1, *Biological Resources*, shows the location of habitats and biological resources within and adjacent to the Project Site.

### **Sensitive Vegetation Communities**

Described below are sensitive vegetation communities located within the project area. All of these resources are located outside areas proposed for reclamation under the Reclamation Plan Amendment, as shown in Figure 4-6.1.

**Coastal Sage Scrub/Disturbed Coastal Sage Scrub.** Coastal sage scrub is a native plant community composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species. Within the Project Site, coastal sage scrub shrub cover varies from 50 percent to 90 percent and typically consists of San Diego County viguiera (*Viguiera laciniata*), California sagebrush (*Artemisia californica*), flat-top buckwheat (*Eriogonum fasciculatum*), and lemonadeberry (*Rhus integrifolia*). In addition to these native shrub species, typical ground cover included broad-leafed filaree (*Erodium botrys*) and fascicled tarplant [*Deinandra (Hemizonia) fasciculata*]. The density of shrub cover varies with exposure, with the denser cover often associated with lemonadeberry occurring in more moist areas and the sparser cover often associated with San Diego barrel cactus (*Ferocactus viridescens*) occurring in more dry conditions. Coastal sage scrub is present west, north, and east of the Project Site.

**Mulefat Scrub.** This relatively tall, patchy riparian community is typically dominated by mulefat (*Baccharis salicifolia*) and develops along intermittent stream channels. This vegetation type can withstand frequent flooding. Mulefat scrub within the Project Site, but outside of the 197 acres proposed for reclamation pursuant to the Reclamation Plan Amendment, consists of nearly monotypic stands of mulefat with little or no understory species. This community occurs in the Otay River riparian corridor in the southwest portion of the Quarry Boundary. These areas would be considered jurisdictional wetlands by the ACOE, CDFG, and RWQCB.

**Southern Willow Scrub.** The Holland vegetation classification system (1986) describes southern willow scrub as a dense, broadleafed, winter-deciduous riparian thicket dominated by several species of willow (*Salix* spp.), with scattered emergent Fremont's cottonwood (*Populus fremontii*) and western sycamore (*Platanus racemosa*). The closed canopy of this riparian community typically inhibits the development of a diverse understory. Southern willow scrub occurs in a small patch in the Otay River riparian corridor in the southwest portion of the Project Site, but outside of the 197 acres proposed for reclamation pursuant to the Reclamation Plan Amendment, and is dominated by arroyo willow. Southern willow scrub would be considered a jurisdictional wetland by the ACOE, CDFG, and RWQCB.

**Mixed Riparian Scrub/Tamarisk Scrub.** Mixed riparian scrub/tamarisk scrub is a community characterized by a heterogeneous mix of riparian scrub species, primarily mulefat, arroyo willow, and salt cedar (*Tamarix ramosissima*). This community was mapped in the Otay River riparian corridor in the southwest portion of the Project Site, but outside of the 197 acres proposed for reclamation pursuant to the Reclamation Plan Amendment. These areas would be considered jurisdictional wetlands by the ACOE, CDFG, and RWQCB.

**Non-Native Grassland.** Where the native vegetation has been disturbed frequently or intensively by grazing, fire, agriculture, or other activities, the native community usually is incapable of recovering. These areas are characterized by weedy, introduced annuals, primarily grasses, including slender wild oat (*Avena barbata*), bromes (*Bromus* spp.), and mustards (*Brassica* and *Hirschfeldia* spp.). Grassland is located in the northern portions of the Project Site, along the lower slopes of Wolf Canyon. Although non-native

grassland is not a native vegetation community, it is often considered a sensitive community because it is used by raptor species for foraging.

**Wetlands and Waters of the U.S.** There are no wetland communities or Water of the United States (WOUS) within the 197-acre area proposed to be reclaimed in accordance with the Reclamation Plan Amendment. Wetland communities and WOUS present outside the 197-acre reclamation area include mulefat scrub, southern willow scrub, and mixed riparian scrub/tamarisk scrub, located within the Otay River, as well as intermittent drainages that are found within Wolf Canyon, located northwest of the Project Site. In addition, a number of unvegetated ephemeral stream channels are present within Wolf Canyon and tributary areas. However, no wetlands or WOUS are present within the 197-acre area that would be reclaimed pursuant to the proposed Reclamation Plan Amendment. Moreover, active and continued resource extraction activities, pursuant to the vested mining rights, are not anticipated to result in formation of wetlands or jurisdictional WOUS within the Project Site. Therefore, no wetlands or WOUS are present or are anticipated to be present within the proposed reclamation area.

**Special-Status Plants.** During the 2009 survey, four special-status plant species were detected in the vicinity of the Project Site, outside of areas that would be directly affected by implementation of the Reclamation Plan Amendment. These species are listed below and shown on Figure 4.6-1, *Biological Resources*:

- Otay tarplant (*Deinandra conjugens*), Federally threatened, State endangered, California Native Plant Society (CNPS) List 1B.1
- San Diego barrel cactus (*Ferocactus viridescens*), CNPS List 2.1
- San Diego County viguiera (*Viguiera laciniata*), CNPS List 4.2
- California box-thorn (*Lycium californicum*), CNPS List 4.2

**Special-Status Wildlife.** During the 2009 surveys, the following special-status wildlife species were detected within the study area, outside of areas that would be directly affected by implementation of the Reclamation Plan Amendment. No special-status wildlife species are anticipated within the 197-acre area proposed for reclamation under the Reclamation Plan Amendment, due to lack of suitable habitat and on-going mining activities.

- California Gnatcatcher (*Poliioptila californica californica*), Federally threatened, California Species of Special Concern (SSC)
- White-tailed kite (*Elanus leucurus*), fully protected in California
- Northern harrier (*Circus cyaneus*), SSC
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), SSC
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), SSC
- Grasshopper sparrow
- Tricolored blackbird
- Loggerhead shrike
- California thrasher

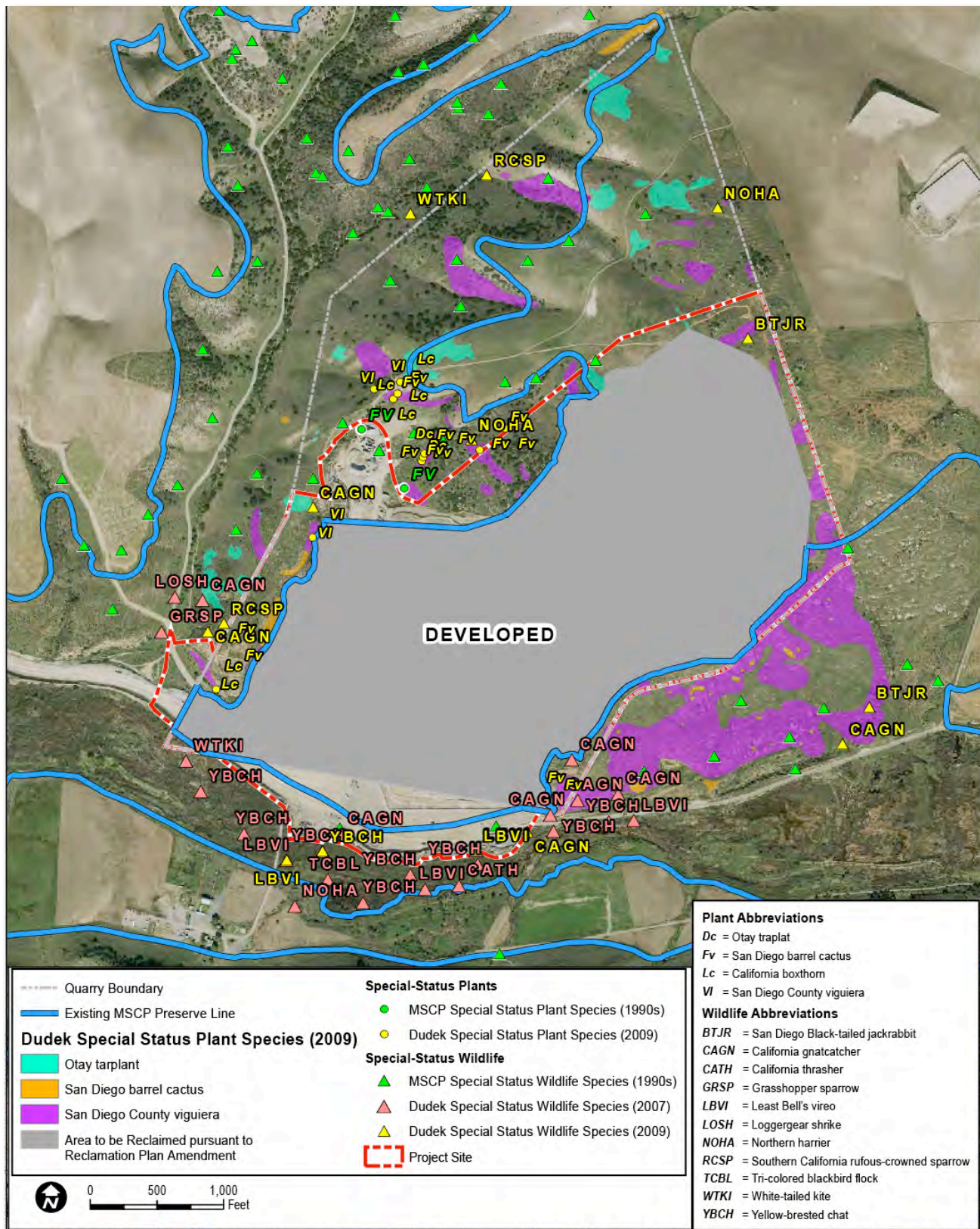


Figure 4.6-1. Biological Resources

**Wildlife Corridors.** Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for dispersal or migration of animals, as well as dispersal of plants. Wildlife corridors contribute to population viability in multiple ways: 1) they assure continual exchange of genes between populations which helps maintain genetic diversity, 2) they provide access to adjacent habitat areas representing additional territory for foraging and mating, 3) they allow for a greater carrying capacity, and 4) they provide routes for colonization of habitat lands following local population extinctions or habitat recovery from ecological catastrophes. Habitat linkages are patches of native habitat that function to join two larger patches of habitat. They serve as connections between habitat patches and help reduce the adverse effects of habitat fragmentation.

Due to substantial human activity within the Project Site, coupled with sparse native habitat and cover for wildlife species, few opportunities are present for wildlife corridor or linkage functions. However, the riparian resources located within the southern portion of the Project Site, outside the 197-acre area proposed for reclamation, are contiguous with the rest of the Otay River Valley, which provides wildlife corridor function and is known to be occupied by a number of special-status species. The Otay River Valley is designated as preserve and allows species to move between the Valley and preserve areas of Wolf Canyon.

### **Regional Resource Planning**

The Project Site is located within the City of Chula Vista MSCP Subarea Plan, which is a part of the larger San Diego County MSCP – a comprehensive, long-term habitat conservation plan developed to address the needs of multiple species and the preservation of natural vegetation communities in southwestern San Diego County. While the quarry itself is not considered part of the MSCP, the surrounding areas are included in the program, with some areas being designated as preserve.

The Project Site is also located within the vicinity of sites covered by the Otay Ranch GDP and RMP, which were approved by the County of San Diego and the City of Chula Vista in October of 1993. The GDP identifies conceptual development, circulation, and open space plans, while the RMP identifies preserve areas within Otay Ranch and contains policies regarding species and habitat conservation, as well as long-term management of the preserve.

### **4.6.2 Thresholds of Significance**

Thresholds used to evaluate potential impacts to biological resources are derived from Appendix G of the State CEQA Guidelines. Significant impacts related to biological resources would occur if the project were to:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or



with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

### 4.6.3 Impact Analysis

The conditions that would occur at the conclusion of mining activities, in year 2089, were used as baseline conditions for determining potential impacts to biological resources. The difference between the conditions in 2089 and the conditions anticipated to result from the proposed Reclamation Plan Amendment is how potential project impacts are measured.

This section describes potential direct, indirect, and cumulative impacts the project may have on biological resources. Direct impacts consist of the loss of on-site habitat and the plant and wildlife species that it contains. Indirect impacts refer to off-site effects, either short-term indirect impacts due to project construction or long-term, chronic indirect impacts associated with the development of the site. Adverse effects on species identified as candidate, sensitive, or special status species may arise from indirect “edge effects” of the proposed project. During project activities, edge effects may include construction-related dust, which has the potential to disrupt species’ habitats for a short term. Possible long-term edge effects may include invasion by exotic plants and animals, exposure to urban pollutants (fertilizers, pesticides, herbicides, and other hazardous materials), hydrological changes (i.e., changes in surface and groundwater levels and quality), and intrusion of artificial light (which may alter the natural variation in diurnal and nocturnal light intensities and spectral properties, and may potentially disrupt the physiology, behavior, and ecology of special-status wildlife). Noise is an edge effect that could be short-term or long-term, or both, and has the potential to disrupt normal activities (such as mating) and subject wildlife to higher predation risks.

Active mining on the Project Site results in noise impacts from the use of heavy equipment for resource extraction and blasting. The proposed Reclamation Plan Amendment and resulting vacant reclaimed land would result in a substantial decrease in noise levels during reclamation, followed by virtually no noise generation on the completely reclaimed site. Once reclaimed, intermittent noise may result from routine site maintenance, assumed to be primarily conducted by hand by a small work team, as necessary.

No riparian habitat, wetlands, or sensitive plant communities occur within the 197 acres that would be reclaimed in accordance with the proposed Reclamation Plan Amendment. Therefore, sensitive habitats and plant communities would not be affected by the project. However, adverse effects on any riparian habitat or other sensitive natural community may arise from indirect edge effects of the proposed project. Short-term, construction-related edge effects may include dust, soil erosion, and water runoff, all of which could disrupt plant vitality. Possible long-term effects include trampling by humans, exotic plant invasion, exposure to urban pollutants (fertilizers, pesticides, herbicides, and other hazardous materials), soil erosion, and hydrological changes (i.e., changes in surface and groundwater level and quality).

No federally protected wetlands would be directly impacted, through direct removal, filling, hydrological interruption, or any other means, by the implementation of the proposed project. Due to no federally

protected wetlands (as defined by Section 404 of the Clean Water Act) being affected by the proposed project, no permits would be required from ACOE, RWQCB, or CDFG.

### **Wildlife Corridors**

No movement of any native resident, migratory fish, or wildlife species would be directly impeded, and no established native resident or migratory wildlife corridor, or wildlife nursery sites, would be directly disturbed. The Otay River Valley, identified as the only wildlife corridor in the project vicinity, would not be directly impacted by the proposed project. There is a chance of slight interference (via indirect impacts of dust, invasion by exotic plants and animals, exposure to urban pollutants, hydrological changes, and noise) with the movement of any native resident, migratory fish, wildlife species, and/or with established native resident or migratory wildlife corridors, or native wildlife nursery sites. This indirect impact would be regarded as potentially significant.

The local policies and ordinances related to protecting the biological resources in the proposed project area are found in the City of Chula Vista's General Plan and Municipal Code. The General Plan outlines specific policies, such as environmental protection, growth management, and implementation measures, for the protection of biological resources. The General Plan also specifies the Project Site as being part of the Otay Valley District within the Otay Ranch Subarea of the East Planning Area. The Otay Valley District, both currently and in the future vision, is made up of mostly undeveloped, relatively flat land, much of which is designated as open space preserve. Consequently, there are adopted City ordinances and zoning policies for open space areas discussed in the Municipal Code which would be applicable to the proposed Project Site. The proposed project would not violate any of the policies or ordinances outlined in either the General Plan or the Municipal Code for the City of Chula Vista.

### **Sensitive Vegetation Communities**

Design features incorporated into the Otay Valley Quarry Reclamation Plan Amendment would avoid potential indirect impacts to special-status vegetation communities occurring in adjacent habitat areas. With incorporation of design features EC-1, EC-2, GW-1, SP-1, and R-3, listed below, potential indirect impacts related to dust, erosion, pollutants, runoff, hydrological changes, and invasion of exotics would be less than significant.

**EC-1:** Reclamation operations employ the following erosion and sediment control measures (as necessary):

- Sedimentation basins.
- Water truck usage and soil compaction via track walking.
- Diversion of run-on and run-off through the use of temporary chevrons.
- Silt fences, wattles, rock slope protection, or other sediment control devices.

**EC-2:** Preventative maintenance activities are performed as part of the SWPPP program and include the following:

- Cleaning of accumulated sediment, debris, and potential contaminants from the stormwater structural controls is conducted as needed before the start of the rainy seasons. This cleaning is done on an as-needed basis during the rainy season.
- Clearing of debris from drain inlets and drainage pipes.

**GW-1:** Fuel or other chemicals present on the mine site will be handled and stored using appropriate containment to prevent accidental spillage into open water bodies.



- SP-1:** Siltation potential associated with waters leaving the site will be minimized by the reclaimed configuration of a large quarry providing abundant capacity to permanently store sediments from surface runoff.
- R-3:** A program of invasive/exotic weed abatement will be implemented if such weeds become present during operations or reclamation. Weed control may include the use of herbicides, mechanical controls, or hand weeding.

### ***Special-Status Plants and Wildlife***

With incorporation of project design features EC-1, EC-2, and GW-1, above, potential indirect impacts related to dust, erosion, and pollutants would be less than significant. With incorporation of design feature SP-1, above, potential indirect impacts related to runoff and hydrological changes would be less than significant. With incorporation of design feature R-3, above, potential indirect impacts related to invasion of exotics would be less than significant.

In addition, potential indirect impacts to special-status plants due to trampling by humans would be avoided by maintaining secure access to and from the reclaimed quarry. Under the proposed Reclamation Plan Amendment, the property would be fenced and gated and all visitors would be required to check in at the administration office, have proper safety gear, and be accompanied to any restricted areas.

### ***Regional Resource Planning***

Within the San Diego County MSCP Subregional Plan is the City of Chula Vista MSCP Subarea Plan, which specifically addresses the project area. The Chula Vista MSCP Subarea Plan provides a blueprint for habitat preservation and forms the basis for Federal and State incidental "take" permits for 86 plant and animal species within the City. Because the Project Site is located outside of the MSCP Subarea Plan Preserve, implementation of the proposed Reclamation Plan Amendment would not conflict with the MSCP Subarea Plan.

Preserve areas, as designated by the City of Chula Vista MSCP, are found adjacent to the existing quarry and are expected to be adjacent to the quarry at the start of reclamation activities in 2089. In order to reduce indirect impacts to the Preserve, the project would be required to adhere to specific guidelines established in Section 7.5.2 of the Chula Vista MSCP Subarea Plan. With incorporation of mitigation measures listed in Section 4.6.5, below, potential indirect impacts to the MSCP Preserve lands adjacent to the Project Site would be mitigated to below a level of significance.

### **4.6.4 Level of Significance Before Mitigation**

Implementation of the Otay Valley Quarry Reclamation project could result in the potential for indirect impacts to the City's MSCP Preserve lands, located adjacent to the Project Site. Potential indirect impacts would be regarded as significant.

### **4.6.5 Mitigation Measures**

#### ***Special-Status Vegetation Communities***

Design features listed in the Otay Valley Quarry Reclamation Plan Amendment would mitigate for potential indirect impacts to special-status vegetation communities occurring in adjacent habitat areas. With incorporation of design features EC-1, EC-2, GW-1, SP-1, and R-3, potential indirect impacts related to

related to dust, erosion, pollutants, runoff, hydrological changes, and invasion of exotics would be less than significant.

In addition, potential indirect impacts to special-status plants due to trampling by humans would be avoided by maintaining secure access to and from the reclaimed quarry. Under the proposed Reclamation Plan Amendment, the property would be fenced and gated and all visitors would be required to check in at the administration office, have proper safety gear, and be accompanied to any restricted areas.

### ***Special-Status Plant and Wildlife Species***

With incorporation of project design features EC-1, EC-2, and GW-1, potential indirect impacts related to dust, erosion, and pollutants would be less than significant. With incorporation of design feature SP-1, potential indirect impacts related to runoff and hydrological changes would be less than significant. With incorporation of design feature R-3, potential indirect impacts related to invasion of exotics would be less than significant.

In addition, potential indirect impacts to special-status plants due to trampling by humans would be avoided by maintaining secure access to and from the reclaimed quarry. Under the proposed reclamation plan amendment, the property would be fenced and gated and all visitors would be required to check in at the administration office, have proper safety gear, and be accompanied to any restricted areas.

Implementation of the following measure, based on guidelines established in Section 7.5.2 of the Chula Vista MSCP Subarea Plan (City of Chula Vista 2003) would mitigate for potential indirect impacts to nesting birds associated with noise during equipment removal and rough grading. With incorporation of mitigation measure BIO-1, potential indirect impacts related to noise would be less than significant.

**BIO-1** Appropriate noise attenuation features will be constructed adjacent to the quarry to minimize noise impacts. Excessively noisy uses or activities adjacent to breeding areas, including temporary grading activities, must incorporate noise reduction measures or be curtailed during the breeding season of sensitive bird species. Construction activity adjacent to the Preserve shall maintain noise levels that do not exceed 60 dB(A) Leq, or ambient noise levels if higher than 60 dB(A) Leq, during the breeding season for nesting sensitive birds. Prior to commencement of reclamation activities, a pre-construction survey shall be conducted to document the location of active nest sites. If active sites are observed, an acoustical analysis shall be provided to the City that demonstrates that adequate noise attenuation features shall be constructed to maintain noise levels below 60 dB(A) Leq at any active nest location. Outside the bird breeding season(s), no restrictions shall be placed on temporary construction noise.

### ***Regional Resource Planning***

Preserve areas under the City of Chula Vista MSCP lie adjacent to the existing quarry and are expected to be adjacent to the quarry at the start of reclamation activities in 2089. In order to reduce indirect impacts to the Preserve, the project would be required to adhere to specific guidelines established in Section 7.5.2 of the Chula Vista MSCP Subarea Plan (City of Chula Vista 2003). These guidelines are reproduced here and would be incorporated into the proposed project as mitigation measures BIO-2 through BIO-3. Guidelines relating to noise are addressed in mitigation measures BIO-1, above.

**BIO-2** *Drainage*

1. All reclamation activities and reclaimed areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials, and other elements that might degrade or harm the natural environment or ecosystem processes within the Preserve. This will be accomplished using a variety of methods including natural detention basins, grass swales, or mechanical trapping devices. These systems shall be maintained approximately once a year, or as often as needed, to ensure proper functioning. Maintenance includes dredging out sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.
2. The project shall implement urban runoff and drainage plans as specified in Section 5.2.4 of the Otay Valley Quarry Reclamation Plan Amendment (December 23, 2010) which will create the least impact practicable for all areas adjacent to the Preserve.
3. Pursuant to the San Diego Regional Water Quality Control Board Municipal Permit, and the City of Chula Vista Storm Water Management Standards Requirements Manual, which includes the SUSMP, all reclaimed areas located adjacent to or discharging directly to an environmentally sensitive area (as defined in the Municipal Permit and the Local SUSMP) are required to implement site design, source control, and treatment control BMPs. For the proposed project and as presented in the Otay Valley Quarry Reclamation Plan Amendment (December 23, 2101) the BMPs shall, at a minimum, include:
  - Sedimentation basins;
  - Water truck usage and soil compaction via track walking;
  - Diversion of run-on and run-off through the use of temporary chevrons;
  - Silt fences, wattles, rock slope protection, or other sediment control devices;
  - Cleaning of accumulated sediment, debris, and potential contaminants from the storm water structural controls is conducted as needed before the start of the rainy seasons. This cleaning is done on an as-needed basis during the rainy season; and
  - Clearing of debris from drain inlets and drainage pipes.
4. Written confirmation that this mitigation measure has been satisfied shall be provided to the City prior to commencement of reclamation activities. Conformation shall be provided to the satisfaction of the City Engineer in the form of an approved National Pollutant Discharge Elimination System Permit (NPDES) and Storm Water Pollution Prevention Plan (SWPPP).

### **BIO-3**     *Invasives*

The project shall comply with Section 5.2.3 of the Otay Valley Quarry Reclamation Plan. The project plant material described in the Reclamation Plan ensures that no invasive non-native plant species will be introduced into areas immediately adjacent to the Preserve. Consistent with the Reclamation Plan, all open space slopes immediately adjacent to the Preserve will be planted with native species that reflect the adjacent native habitat.

Written confirmation that this mitigation measure has been satisfied shall be provided to the City prior to commencement of reclamation activities. Confirmation shall be provided to the satisfaction of the Development Services Director (or designee) in the form of landscape and

irrigation plans prepared consistent with the list of approved plant species contained in the Otay Valley Quarry Reclamation Plan Amendment.

Relative to biological buffers, implementation of project design features EC-1, EC-2, GW-1, SP-1, and R-3, as required by the Reclamation Plan Amendment and presented in Section 4.6.3 would avoid significant indirect impacts.

Design features EC-1, EC-2, GW-1, SP-1, and R-1, incorporated in the Reclamation Plan Amendment, shall be complied with as set forth therein.

### **4.6.6 Level of Significance After Mitigation**

With implementation of requirements of the Reclamation Plan Amendment, as well as mitigation measures listed in Section 4.6.5 above, impacts to biological resources would be mitigated to below a level of significance.



## 4.7 CULTURAL RESOURCES

This section is summarized from the *Cultural Resources Letter* prepared by Dudek, Inc., dated May 10, 2010. A complete copy of the *Cultural Resources Letter* is included as Appendix G to this EIR.

### 4.7.1 Existing Environmental Setting

#### **Historic Background**

Native American presence in San Diego County is known to extend back approximately 9,000 years before the present. The oldest sites in the region are represented by an artifact assemblage that was first described by Malcolm Rogers as the “Scraper-makers” and later named the San Dieguito (Rogers 1929, 1945, 1966). The people who are associated with this period, circa 9,000 years before the present, left an artifact assemblage that is typified by large flaked stone tools.

In the South County region of San Diego, there is evidence to suggest that the most widely represented period of site development is the very long La Jolla phase. Robbins-Wade (1990) concludes that “Otay Mesa appears to have been used mainly between 7,000 and 2,000 years ago, but the chronometric data come from only 13 of the almost 200 sites recorded on the mesa.” This description can be applied with some confidence to the remaining area for the baseline coverage.

Following the La Jolla phase is the Late Prehistoric Period. This period probably reflects the emergence of populations related to the ethnographic populations of the area. In the Chula Vista General Plan region, there is sporadic evidence for Late Prehistoric settlement based primarily on the occurrence of ceramic items at recorded sites and on published records. The presence of ceramics, long considered an indication of Late Prehistoric Period association, is rare in the coastal Chula Vista region. Significant Late Prehistoric sites occur in the Otay River Valley and the far eastern portion of the General Plan area, east of the Otay Lakes.

The Chula Vista area was part of a Spanish land grant known as Rancho del Rey, the King’s Ranch. Under Mexican rule in 1821, this ranch became known as Rancho de la Nacion. It encompassed National City, Chula Vista, Bonita, Sunnyside, and the Sweetwater Valley. In 1845, the ranch was granted to Juan Forster, son-in-law of Mexican governor Pio Pico.

In 1885, Frank Kimball brought the Santa Fe Railroad to Southern California, with its first terminus in National City. Several directors of the Santa Fe Railroad and Colonel W.G. Dickinson, a professional town planner, formed the San Diego Land and Town Company. They began developing the area by subdividing a 5,000-acre portion into five-acre lots. The lots were separated with avenues and streets 80 feet in width and a steam motor passed through the center of the streets. The purchaser was required to build thereon.

The Sweetwater Dam was built by the San Diego Land and Town Company to bring water to Chula Vista; a railroad was built to connect Chula Vista and Otay Mesa with National City and San Diego. The people coming to Chula Vista grew lemons, and in time, the area became the largest lemon-growing center in the world.

The City was incorporated in 1911 with a population of 550. After its incorporation, Chula Vista continued to be a leading lemon-growing center. Other important crops were tomatoes, celery, and salt. The Western

Salt Works had been operating on the Chula Vista bayfront since the beginning of the century. From 1916 to 1920, Chula Vista had a kelp processing plant that produced potash and acetone to make cordite used by the British to make bombs during World War I. This plant, previously located on the site known as Gunpowder Point, had the largest kelp harvesting fleet and tank farm in the world at that time. Just after World War II, Rohr Aircraft Company was established on the bayfront.

The Rohr Aircraft Corporation moved to Chula Vista in 1941. Rohr was started in San Diego in 1940 and moved to their Chula Vista location in February of the following year. In July of 1941, they employed 752 people and by the height of World War II they employed 9,000 people. By 1945 Rohr was the largest producer of aircraft power packages in the world, and by 1950 the influx of workers to the facility had doubled the population of Chula Vista to over 16,000.

### **Regulatory Plans & Policies**

#### **Chula Vista General Plan**

The City of Chula Vista's General Plan outlines objectives and policies for the protection and preservation of cultural and paleontological resources.

*Objective E-9:* Protect Chula Vista's important cultural resources and support and encourage their accessibility to the public.

*Policy E 9.1:* Continue to assess and mitigate the potential impacts of private development and public facilities and infrastructure to cultural resources, in accordance with CEQA.

*Policy E 9.2:* Support and encourage the accessibility of Chula Vista's important cultural resources to the public for educational; religious; scientific; and other purposes, including the establishment of museums and facilities accessible to the public, where such resources can be appropriately studied, exhibited, curated, etc.

*Policy E 9.3:* Discourage disruption, demolition, and other negative impacts to historic cultural resources.

#### **City of Chula Vista's Resource Conservation Commission (RCC)**

The legislative basis for historic preservation in Chula Vista is compliance with CEQA and the Chula Vista Municipal Code [Chapter 2.32, Sections 2.32.030 (j), 2.32.070, and 2.32.090], which falls under the purview of the City's Resource Conservation Commission (RCC). The RCC advises the City Council on ways to safeguard the City's historic, aesthetic, social, economic, political, and architectural past. As part of this responsibility, the RCC recommends to the City Council the designation of any site which it has found to meet the criteria as a historical site. The City adopted the Mills Act Program in 2001, which is a tax incentive program for owners of historic properties. The historic designation process and the Mills Act Program have resulted in the development of the Chula Vista List of Designated Historic Sites, which constitutes the City's local register of historical resources.

In 2002, the City approved the formation of an Ad Hoc Historic Preservation Committee to develop a historic preservation plan that would coordinate with the General Plan Update. The purpose of the Ad Hoc Historic Preservation Committee was to:



- Evaluate the City's existing historic preservation program;
- Make a recommendation for an appropriate program for the future; and
- Identify short-term and long-term tasks that would assist the City of Chula Vista in accomplishing the mission for historic preservation.

The report of the Ad Hoc Historic Preservation Committee titled An Evaluation of Historic Preservation in Chula Vista was adopted by the City Council on September 30, 2003 (Resolution #2003-416).

The Project Site is the location of on-going resource extraction and processing operations. Structures on-site are minimal and consist of those temporary buildings necessary for operations. No structures of historical or cultural significance are located on-site. As a fully extracted quarry, no archeological resources or human remains exist on-site.

### 4.7.2 Thresholds of Significance

Thresholds used to evaluate potential impacts to cultural resources are derived from Appendix G of the State CEQA Guidelines. Significant impacts related to cultural resources would occur if the project were to:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; or
- Disturb any human remains, including those interred outside of formal cemeteries.

### 4.7.3 Impact Analysis

The Project Site is the location of current and on-going resource extraction. Resource extraction activities involve removal of uneconomic surface materials, blasting and crushing hard rock, hauling raw materials, and processing. As such, there is no evidence of cultural resources on the site.

Reclamation activities for the proposed project site would include backfilling and compaction, recontouring, surface and slope stabilization, erosion control, revegetation, stream protection, grading, drainage and water diversion, topsoil salvage and redistribution, and equipment removal. Areas proposed for reclamation under the proposed project would have been subjected to excavation and other related mining activities prior to reclamation; therefore, while no historic-period resources are expected to exist on the project site at the time reclamation is to begin, as any historical resources potentially existing on-site would have been removed or demolished during quarry operations. Because the project site would be subjected to excavation and mining operations prior to reclamation, thereby producing a geologically disturbed area, there is a very low likelihood of reclamation activities impacting historical resources. Therefore, impacts to historical resources would be less than significant.

Proposed reclamation would not cause a substantial adverse change in the significance of an archaeological resource. However, proposed site grading and other planned reclamation activities including backfilling and compaction, recontouring, surface and slope stabilization, erosion control measures, and topsoil salvage and redistribution have the potential to impact unknown archaeological resources that could exist on the project

site. Therefore, the project has the potential to result in a significant impact to archaeological resources. Implementation of mitigation measure CR-1 in Section 4.7.5, *Mitigation Measures*, below, would reduce potential impacts to archaeological resources to a less than significant level.

### 4.7.4 Level of Significance Prior to Mitigation

Although a low probability, the discovery of cultural resources or human remains would be considered a potentially significant impact. Implementation of mitigation measure CR-1 listed below would reduce impacts to a less than significant level.

### 4.7.5 Mitigation Measures

- CR-1** Prior to implementation of the Reclamation Plan Amendment, the project applicant shall contract with a San Diego County-certified archaeologist to implement a grading-monitoring program to the satisfaction of the City of Chula Vista. Verification of the contract shall be presented, in letter from the Project Archaeologist to the City of Chula Vista. The program shall include, but not be limited to, the following:
1. The consulting archaeologist shall contract with a Native American Observer to be involved with the grading-monitoring program.
  2. During the original cutting of previously undisturbed deposits, the archaeological monitor(s) (and Native American Observer) shall be on site, depending on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. Monitoring and the need for monitoring will be at the discretion of the qualified principal archaeologist. Monitoring locations may also include designated archeological high-probability areas. Intermittent monitoring may occur in areas of moderate archeological sensitivity at the discretion of the qualified/principal archaeologist. Multiple monitors may be required, due to the amount of grading being completed at any time, at the discretion of the principal archaeologist.
  3. In the event that previously unidentified potentially significant cultural resources are discovered, the archaeologist shall have the authority to divert or temporarily halt ground-disturbance operations in the area of discovery to allow evaluation of potentially significant cultural resources. The San Diego County Archaeologist must concur with the evaluation before construction activities will be allowed to resume in the affected area. For significant cultural resources, a Research Design and Data Recovery Program to mitigate impacts shall be prepared by the consulting archaeologist and approved by the San Diego County Archaeologist, then carried out using professional archaeological methods. If any human remains are discovered, the San Diego County Coroner shall be contacted. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant (MLD), as identified by the Native American Heritage Commission, shall be contacted in order to determine proper treatment and disposition of the remains.
  4. Before construction activities are allowed to resume in the affected area, the artifacts shall be recovered and features recorded using professional archaeological methods. The

- archaeological monitor(s) and Native American Observer shall determine the amount of material to be recovered for an adequate artifact sample for analysis.
5. In the event that previously unidentified cultural resources are discovered, all cultural material collected during the grading-monitoring program shall be processed and curated according to current professional repository standards. The collections and associated records shall be transferred, including title, to an appropriate federally recognized curation facility within San Diego County, to be accompanied by payment of the fees necessary for permanent curation.
  6. In the event that previously unidentified cultural resources are discovered, a report documenting the field and analysis results and interpreting the artifact and research data within the research context shall be completed and submitted to the satisfaction of the City of Chula Vista prior to completion of the fourth stage of reclamation.
  7. In the event that no cultural resources are discovered, a brief letter to that effect shall be sent to the City of Chula Vista by the consulting archaeologist, confirming that the grading-monitoring activities have been completed.

### **4.7.6 Level of Significance After Mitigation**

With implementation of mitigation measure CR-1, potential impact to cultural resources would be reduced to below a level of significance.



## 4.8 PALEONTOLOGICAL RESOURCES

The analysis presented in this section analyzes the potential for impacts to paleontological resources based on existing geologic formations that underlay the Project Site. Refer to Section 4.11, *Geology and Soils*, for a discussion of the geologic formations that could be affected by the project and Figure 4.11-1, *Regional and Site Geology*, for the location of geologic formations.

### 4.8.1 Existing Environmental Setting

Paleontological resources, or fossils, are the remains and/or traces of prehistoric plant and animal life. Fossils provide direct evidence of ancient organisms and document the patterns of organic evolution and extinction that have characterized the history of life. Fossil remains, such as bones, teeth, shells, and wood are found in the geologic deposits (sedimentary rock formations) within which they were originally buried in deep bedrock layers of sandstone, mudstone, or shale. Paleontological resources contain not only the actual fossil remains, but also the localities where those fossils are collected and the geologic formations containing the localities.

The potential for fossil remains at a location can be predicted through previous correlations that have been established between the fossil occurrence and the geologic formations within which they are buried. For this reason, knowledge of the geology of a particular area and the paleontological resource sensitivity of particular rock formations make it possible to predict where fossils will or will not be encountered.

Impacts to paleontological resources are typically rated from high to zero depending upon the resource sensitivity of impacted formations. The specific criteria applied for each sensitivity category are summarized below.

- **High Sensitivity** - High sensitivity is assigned to geologic formations known to contain paleontological localities with rare, well-preserved, critical fossil materials for stratigraphic or paleoenvironmental interpretation, and fossils providing important information about the paleobiology and evolutionary history (phylogeny) of animal and plant groups. Generally speaking, highly sensitive formations produce vertebrate fossil remains or are considered to have the potential to produce such remains.
- **Moderate Sensitivity** - Moderate sensitivity is assigned to geologic formations known to contain paleontological localities with poorly preserved, common elsewhere, or stratigraphically unimportant fossil material. The moderate sensitivity category is also applied to geologic formations that are judged to have a strong, but unproven potential for producing important fossil remains (Bay Point Formation).
- **Low Sensitivity** - Low sensitivity is assigned to geologic formations that, based on their relatively youthful age and/or high energy depositional history, are judged unlikely to produce important fossil remains. Typically, low sensitivity formations produce poorly-preserved invertebrate fossil remains in low abundance (Quaternary Alluvium).
- **Zero Sensitivity** - Zero sensitivity is assigned to geologic formations that are entirely igneous in origin and therefore have no potential for producing fossil remains. Artificial fill materials are also placed in this category.

As described in Section 4.11, *Geology and Soils*, of this EIR, the project area is predominantly underlain by Santiago Peak Volcanics. Smaller areas of Stream-Terrace Deposits and Alluvium are located in the southern border of the Project Site, as well as along a portion of the western edge. The Otay Formation intrudes in a corner of the Project Site along its western edge, and a small pocket of Mission Valley Formation occurs in the southwest corner. The sensitivity for each of these geologic formations to contain important paleontological resources is described below.

### **Santiago Peak Volcanics**

The Santiago Peak Volcanics are comprised of Metasedimentary and Metavolcanic formations. Only the Metasedimentary formation has the potential to contain fossil remains. These formations can be found in the Black Mountain Ranch, La Jolla Valley, Fairbanks Ranch, Mira Mesa, and Rancho Peñasquitos areas of San Diego. Santiago Peak Volcanics found in these areas are assigned moderate resource sensitivity. The Metavolcanic formations found in other areas of the County – including the Project Site - have no potential to contain fossil remains and are assigned a zero resource sensitivity.

### **Stream-Terrace Deposits**

Deposits of coarse-grained, gravelly sandstones, pebble and cobble conglomerates, and claystones occur along the edge of many of the larger coastal valleys. These deposits generally occur at levels above the active stream channels and represent the sediments of ancient river courses and are anywhere from 10,000 to 500,000 years old. Fossils of “Ice Age” mammals have been collected from the South Bay Freeway, such as ground sloth, mammoth, wolf, camel, and mastodon. A low to moderate resource sensitivity is assigned to this formation.

### **Alluvium**

The sediments at the bottom of stream beds of the later Quaternary alluvium are generally younger than 10,000 years old. Fossils are usually not found in these deposits in the Coastal Plain Province. However, there is one notable exception in San Diego. Teeth and limb bones of a mammoth were found in floodplain deposits of the Tijuana River Valley. The floors of Otay Valley, Mission Valley, Rose Canyon, Sorrento Valley, and San Dieguito Valley are the sites where later Quaternary alluvial deposits are found. Because of their young age, they are assigned low paleontological resource sensitivity.

### **Mission Valley Formation**

This formation is the only Eocene rock unit in southern California to have a radiometric date directly associated with fossil mammal localities. The marine strata of the Mission Valley Formation have produced abundant and generally well-preserved remains of marine microfossils, macroinvertebrates, and vertebrates. Fluvial strata of the formation have produced well-preserved examples of petrified wood and fairly large and diverse assemblages of fossil land mammals. The fact that marine microfossils and land mammals occurred at the same time is extremely important, as it allows for the direct correlation of terrestrial and marine faunal time scales. The formation crops out discontinuously from Otay Valley in the south to at least Miramar Reservoir in the north, and from Old Town in the west to Spring Valley, El Cajon Valley, and Santee in the east. The Mission Valley Formation represents one of the few instances in North America where such comparisons are possible, and they are assigned high paleontological resource sensitivity.

### **Otay Formation**

The Otay Formation is a fluvial sedimentary rock unit. Numerous fossil localities have been discovered in the upper portion of the formation. Well-preserved remains of a diverse assemblage of terrestrial vertebrates



were found here. Based on recent discoveries, the Otay Formation is now considered to be the richest source of late Oligocene terrestrial vertebrates in California. This formation is exposed throughout, from approximately the latitude of SR-94 south to the International Border and from I-805 east to the base of the San Ysidro Mountains and San Miguel Mountain. Part of the formation is exposed extensively in the area around Lower Otay Lake, as well as in patches along the north side of the San Ysidro Mountains as far east as Sycamore Canyon. The Otay Formation is assigned a high paleontological resource sensitivity, because of its important fossils.

### **Regulatory Framework**

#### **Chula Vista General Plan**

The City of Chula Vista's General Plan outlines objectives and policies for the protection and preservation of cultural and paleontological resources.

*Objective E-10:* Protect important paleontological resources and support and encourage public education and awareness of such resources.

*Policy E 10.1:* Continue to assess and mitigate the potential impacts of private development and public facilities and infrastructure to paleontological resources in accordance with CEQA.

*Policy E 10.2:* Support and encourage public education and awareness of local paleontological resources, including the establishment of museums and educational opportunities accessible to the public.

### **4.8.2 Threshold of Significance**

According to Appendix G of the CEQA Guidelines, the proposed project could have a significant effect on paleontological resources, if it would:

- Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

In addition, the City of Chula Vista General Plan requires the following:

1. On a case-by-case basis, the following grading thresholds shall be used by the City to determine whether or not a proposed project may potentially result in significant impacts to sensitive paleontological resources:

<b>Sensitivity Rating</b>	<b>Excavation Volume and Depth Thresholds</b>
High	>1000 cubic yards and >5 feet deep
Moderate	>2000 cubic yards and > 5 feet deep
Zero-Low	Mitigation Not Required

2. The project will require implementation of a pre-construction mitigation program and/or construction mitigation program. All mitigation programs shall be performed by a qualified professional paleontologist, defined here as an individual with a M.S. or Ph.D. in paleontology or geology who has proven experience in San Diego County paleontology and who is

knowledgeable in professional paleontological procedures and techniques. Fieldwork may be conducted by a qualified paleontological monitor, defined here as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor shall always work under the direction of a qualified paleontologist.

### 4.8.3 Impact Analysis

The project proposes a Reclamation Plan Amendment for the Otay Valley Quarry. The Otay Valley Quarry is the location of on-going mining activities scheduled to continue on-site until resources are depleted, which is estimated to be 2089. At that time, the Reclamation Plan Amendment would be implemented.

The topography of the completed mining site will reflect a typical hard rock quarry configured as an open pit. As part of the Reclamation Plan Amendment, mined surfaces would be leveled and stabilized for erosion control. Active revegetation, as proposed by the Reclamation Plan Amendment, would occur along the quarry's edges and outward-facing slopes, the larger lake benches, and the relatively level areas near the west and south boundaries. Due to where mining will occur on the Project Site, reclamation would occur almost entirely within areas underlain by Santiago Peak Volcanics, which exhibit zero potential for paleontological resources. Revegetation would occur in areas where smaller pockets of the Mission Valley and Otay Formations occur in the southwest corner of the Project Site. Both of these formations have a high potential to contain important paleontological resources. Proposed site grading and other reclamation activities have the potential to impact unknown paleontological resources that could exist on the Project Site. Due to the potential to encounter these resources during reclamation activities, mitigation measure PALEO-1 would be required as provided below. Mitigation measure PALEO-1 would reduce impacts to paleontological resources to a less than significant level.

### 4.8.4 Level of Significance Before Mitigation

Implementation of the proposed Otay Valley Quarry Reclamation Plan Amendment could result in impacts to paleontological resources.

### 4.8.5 Mitigation Measures

Implementation of the following mitigation measure would reduce potential impacts to paleontological resources to below a level of significance.

- PALEO-1**
1. The project will require implementation of a pre-construction mitigation program and/or construction mitigation program approved by the City. All mitigation programs shall be performed by a qualified professional paleontologist, defined here as an individual with a M.S. or Ph.D. in paleontology or geology who has proven experience in San Diego County paleontology and who is knowledgeable in professional paleontological procedures and techniques. Fieldwork may be conducted by a qualified paleontological monitor, defined here as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor shall always work under the direction of a qualified paleontologist.
  2. Pre-construction mitigation shall be implemented if the qualified professional paleontologist determines there is a potential for well-preserved and significant fossil remains, discovered in the assessment phase, would be destroyed during initial brush clearing and equipment move-on. The individual tasks of this program include:

- a. Surface prospecting for exposed fossil remains, generally involving inspection of existing bedrock outcrops but possibly also excavation of test trenches;
  - b. Surface collection of discovered fossil remains, typically involving simple excavation of the exposed specimen but possibly also plaster jacketing of large and/or fragile specimens or more elaborate quarry excavations of richly fossiliferous deposits;
  - c. Recovery of stratigraphic and geologic data to provide a context for the recovered fossil remains, typically including description of lithologies of fossil-bearing strata, measurement and description of the overall stratigraphic section, and photographic documentation of the geologic setting;
  - d. Laboratory preparation (cleaning and repair) of collected fossil remains, generally involving removal of enclosing rock material, stabilization of fragile specimens (using glues and other hardeners), and repair of broken specimens;
  - e. Cataloging and identification of prepared fossil remains, typically involving scientific identification of specimens, inventory of specimens, assignment of catalog numbers, and entry of data into an inventory database;
  - f. Transferal, for storage, of cataloged fossil remains to an accredited institution (museum or university) that maintains paleontological collections (including the fossil specimens, copies of all field notes, maps, stratigraphic sections, and photographs); and
  - g. Preparation of a final report summarizing the field and laboratory methods used, the stratigraphic units inspected, the types of fossils recovered, and the significance of the curated collection.
3. Construction mitigation shall be implemented as part of reclamation activities, at the discretion of the qualified professional paleontologist and in accordance with the approved mitigation program. The scope and pace of reclamation will generally dictate the scope and pace of mitigation. The individual tasks of a construction mitigation program typically include:
  - a. Monitoring of any grading to discover unearthed fossil remains, generally involving inspection of ongoing exposures;
  - b. Salvage of unearthed fossil remains, typically involving simple excavation of the exposed specimen but possibly also plaster jacketing of large and/or fragile specimens, or more elaborate quarry excavations of richly fossiliferous deposits;
  - c. Recovery of stratigraphic and geologic data to provide a context for the recovered fossil remains, typically including description of lithologies of fossil-bearing strata, measurement and description of the overall stratigraphic section, and photographic documentation of the geologic setting;
  - d. Laboratory preparation (cleaning and repair) of collected fossil remains, generally involving removal of enclosing rock material, stabilization of fragile specimens (using glues and other hardeners), and repair of broken specimens;
  - e. Cataloging and identification of prepared fossil remains, typically involving scientific identification of specimens, inventory of specimens, assignment of

- catalog numbers, and entry of data into an inventory database;
- f. Transferal, for storage, of cataloged fossil remains to an accredited institution (museum or university) that maintains paleontological collections, including the fossil specimens, copies of all field notes, maps, stratigraphic sections and photographs; and
- g. Preparation of a final report summarizing the field and laboratory methods used, the stratigraphic units inspected, the types of fossils recovered, and the significance of the curated collection.

### **4.8.6 Level of Significance After Mitigation**

Potentially significant impacts to paleontological resources would be reduced to below a level of significance with implementation of mitigation measure PALEO-1.

## 4.9 AGRICULTURAL RESOURCES/FORESTRY

### 4.9.1 Existing Environmental Setting

The Project Site is currently an active hard rock quarry. The Project Site contains no significant areas of agricultural resources, forested areas, or timberlands. Reclamation activities are to occur in an area that will have been fully mined. There are also no forested lands or timberlands in areas surrounding the Project Site. The surrounding land uses include open space and preserve areas to the immediate east, south, and west; Otay Ranch Village Four and the Otay Landfill are located to the northwest. Project Site, as shown in Figure 4.9-1, *San Diego County Important Farmland*, the Project Site is not classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

### 4.9.2 Threshold of Significance

According to Appendix G of the CEQA Guidelines, a project could have a significant adverse impact on agricultural resources, if its implementation results in any of the following:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use;
- Conflict with existing zoning for, or cause rezoning of, forest land [as defined in PRC Section 12220(g)], timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production [as defined by Government Code Section 51104(g)];
- Result in the loss of forest land or conversion of forest land to non-forest use; or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

### 4.9.3 Impact Analysis

According to the *San Diego County Important Farmland* map prepared by the California Department of Conservation (CDC) (see Figure 4.9-1), the Project Site is not located within an area designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (CDC 2006). The site is classified as Other Land, Grazing Land, and Farmland of Local Importance, but is not currently used for these purposes; the project site is the location of on-going resource extraction. Therefore, no impact to existing farmlands would occur as a result of the proposed project. Additionally, the proposed Project Site is not zoned for agricultural use and is not subject to a Williamson Act contract; therefore, no impacts would occur.

## 4.9 AGRICULTURAL RESOURCES/FORESTRY

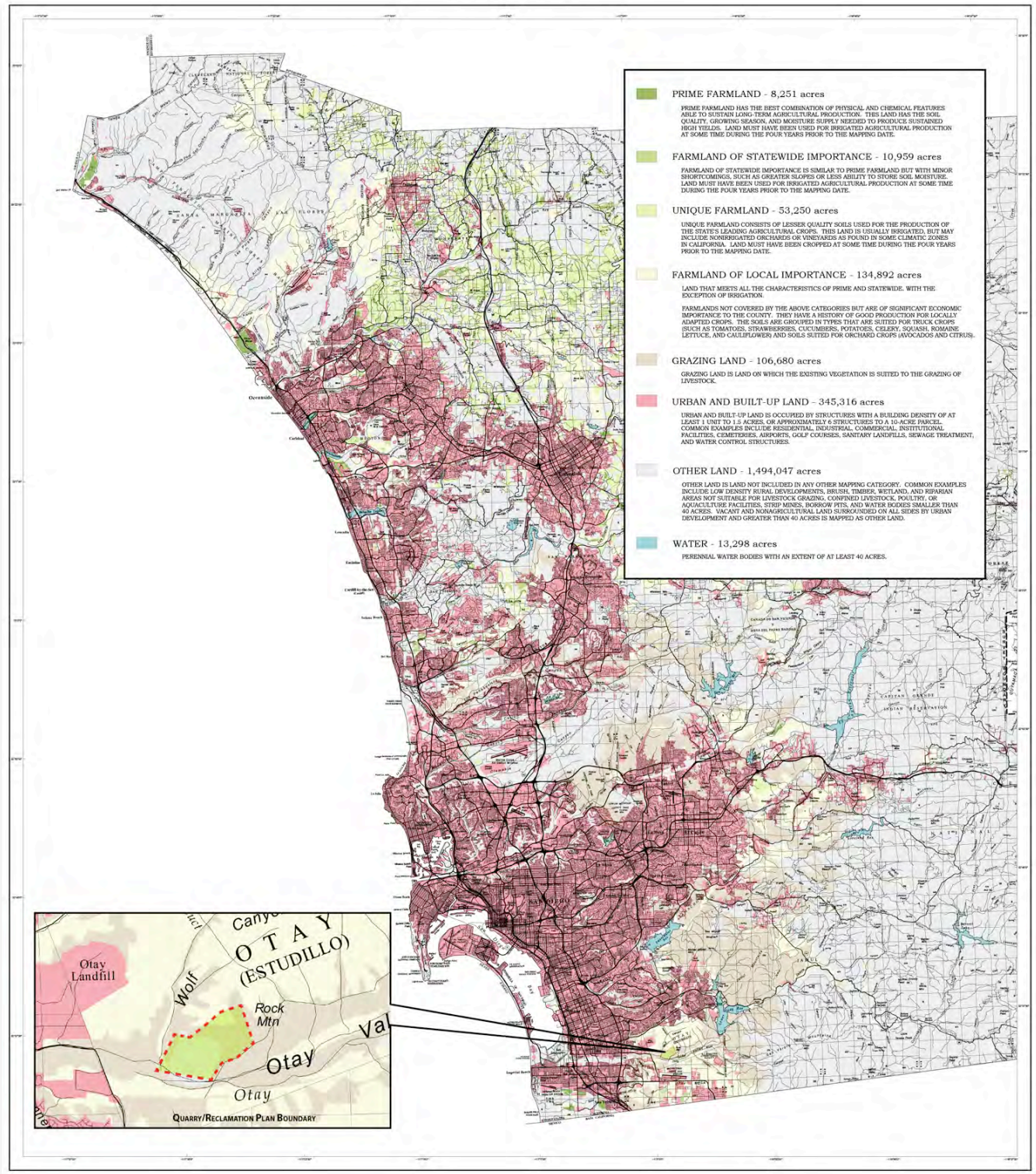


Figure 4.9-1. San Diego County Important Farmland



No portion of the project is located within or adjacent to existing agricultural areas, nor would project implementation result in the conversion of farmland to non-agricultural use. Open space and land designated for residential uses surrounds the majority of the Project Site; there are not forested lands or timberlands that could be affected by the proposed project. The reclamation of the Otay Valley Quarry would not involve any changes in the existing environment, which could result in the conversion of farmland to non-agricultural use or forested lands to non-forest use. No impacts would occur.

### **4.9.4 Level of Significance Before Mitigation**

The project would not result in the loss or change of significant agricultural resources, and no impact to agricultural resources would occur.

### **4.9.5 Mitigation Measures**

Reclamation of the Otay Valley Quarry would not result in the loss or change of significant agricultural resources. No mitigation is required.

### **4.9.6 Level of Significance After Mitigation**

The proposed project would not result in impacts to agricultural resources and forestry. No mitigation would be required.



# 4.10 HYDROLOGY/DRAINAGE/WATER QUALITY

This section evaluates the potential impacts of the proposed project on hydrology and water quality. Impacts to hydrology and water quality were analyzed based on the *Hydrogeology Study for the Otay Valley Quarry* (Dudek 2011) (Appendix J to this EIR), *Water Quality Report* (Dudek 2010) (Appendix H of this EIR), *Stormwater Hydrology Study* (Dudek 21010) (Appendix I of this EIR), as well as the Chula Vista General Plan EIR (2005).

## 4.10.1 Existing Environmental Setting

### **Regulatory Plans and Policies**

#### **Clean Water Act**

The Clean Water Act (CWA) is the primary federal law that protects the nation's waters, including lakes, rivers, aquifers, and coastal areas. Section 401 of the CWA requires that any applicant for a Federal permit to conduct any activity, including the construction or operation of a facility, which may result in the discharge of any pollutant, obtain certification from the State. Section 402 of the Clean Water Act established the NPDES to regulate the discharge of pollutants from point sources. Section 404 of the Clean Water Act established a permit program to regulate the discharge of dredged material into waters of the U.S. Section 303 of the CWA requires states to identify surface waters that have been impaired. Under Section 303(d), states, territories, and authorized tribes are required to develop a list of water quality segments that do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology.

The Porter–Cologne Water Quality Control Act (1969), California Water Code Section 13000 et seq., provides for aesthetic values, fish and wildlife preservation, water reclamation, and comprehensive planning and regulation to attain the highest “reasonable” water quality in consideration of conflicting demands. California's Porter–Cologne Water Quality Control Act, which became Division 7 (Water Quality) of the State Water Code, establishes the responsibilities and authorities of the nine RWQCBs (previously called Water Pollution Control Boards) and the State Water Resources Control Board (SWRCB), and directs each regional board to formulate and adopt a water quality control plan for all areas within the region.

#### **Safe Drinking Water Act**

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater wells. (SDWA does not regulate private wells that serve fewer than 25 individuals.) Originally, SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments greatly enhanced the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach ensures the quality of drinking water by protecting it from source to tap.

### **Point Source Permits (Water Discharge Requirements & NPDES)**

The San Diego RWQCB regulates most point source discharges of waste water through the issuance of Waste Discharge Requirements (WDR) and NPDES permits. Compliance with these permits requires self-monitoring and reporting to the RWQCB by each individual discharger. All applicable dischargers are required to comply with the conditions of these permits.

### **Construction Permit**

All construction activities must comply with all applicable regulations established by the EPA, as set forth in the Section 402 NPDES permit requirements for urban runoff and stormwater discharge. Compliance with NPDES includes meeting the requirements of the General Permit for Stormwater Discharges Associated with Construction Activity (General Construction Permit). In order to be covered under the General Construction Permit, a Notice of Intent must be filed with the RWQCB. Compliance with the permit requires that a SWPPP be prepared and implemented for any project within the study area larger than one acre in size. The Post-Construction Stormwater Management Plan requires that Permanent BMPs be established to prevent the discharge of sediment and other pollutants in stormwater runoff from a completed project. Typical post-development BMPs to treat water quality are concerned with nuisance water and first flush events. This includes the volume of runoff produced from an 85th percentile, 24-hour rainfall event.

### **Environmental Setting**

#### **San Diego Bay Watershed**

Runoff from the Project Site eventually reaches the San Diego bay, located approximately ten miles west of the Project Site. The San Diego Bay Watershed encompasses a 415-square-mile area that extends more than 50 miles to the east to the Laguna Mountains. The watershed lies at sea level at San Diego Bay and reaches a maximum elevation of approximately 6,000 feet above sea level at the eastern boundary. The majority of the watershed land area lies north of the border with Mexico and south of I-8. The headwaters of the watershed begin in the unincorporated area of San Diego County and then transect all or portions of seven cities, including Chula Vista.

The San Diego Bay covers 10,532 acres of water and 4,419 acres of tidelands. The majority of freshwater input to the Bay is from surface runoff from urban areas and intermittent flow from rivers and creeks during rain events. There are over 200 storm drains that discharge into the Bay. The major watercourses feeding the Bay include the Sweetwater River, Otay River, Chollas Creek, Paleta Creek, Paradise Creek, and Switzer Creek.

The San Diego Bay watershed is comprised of three sub-watersheds: the Pueblo San Diego, Sweetwater, and Otay hydrologic units. The Project Site is within the Otay Hydraulic Unit.

#### **Otay Hydrologic Unit**

The Project Site is located within the Otay Hydrologic Unit. The watershed encompasses approximately 160 square miles. The predominant land uses in the watershed are open space (67 percent) and urban/residential (20 percent). The major inland hydrologic features, Upper and Lower Otay Lakes, are two water supply reservoirs that also provide important habitat and recreational opportunities. The watershed consists largely of unincorporated areas but also includes portions of the City of Chula Vista, as well as other cities. The current population in the Otay watershed is approximately 150,000 people. Current sources and activities

which contribute to degraded water quality include urban runoff, agricultural runoff, resource extraction, septic systems, marinas, and boating activities.

### **Surface Water**

The primary bodies of surface water in the vicinity of the quarry are the Upper and Lower Otay Reservoirs, located approximately four miles east of the quarry, and the Otay River, which runs along the southern boundary of the quarry. Water is generally not released from the reservoirs to the river bed except in years of high precipitation. Therefore, surface water flow in the Otay River is intermittent, occurring in association with local precipitation and without a baseflow component.

Within the quarry itself, surface water has ponded on the quarry floor at an elevation of 176.6 feet AMSL. The pond is a constant feature through the year, and likely reflects the elevation of a local zone of perched groundwater. Similar zones of localized perched groundwater have been observed at an elevation of 200 feet AMSL at the Otay Annex Sanitary Landfill, approximately one mile west of the quarry.

### **Groundwater**

There is limited on-site water level information for the quarry. A well was drilled at the quarry to a total depth of 800 feet below ground surface (bgs) in 2009. The surface elevation of the well was 285 feet AMSL and the first water was encountered at 160 feet bgs, or at an elevation of 125 feet AMSL (Resource Design Technology 2009). This elevation is deeper than the elevation of the ponded water observed on the quarry floor (176.6 feet AMSL). The primary groundwater producing fracture in the well was encountered at 377 feet bgs or -92 feet AMSL. No additional groundwater was encountered between -92 feet AMSL and the base of the well. The maximum flow rate measured in the well was 1.5 gallons per minute (gpm). No information on the screen interval of the well or water level in the well was provided in the Resource Design Technology report.

Dudek was unable to obtain a copy of the well completion report for the quarry well through either Otay Quarry LLC, the Department of Water Resources, or the County of San Diego Department of Environmental Health. Both the Department of Water Resources and the County of San Diego Department of Environmental Health had no well records for Project Site APN 644-060-06 or the site address of 2041 Heritage Road. Additionally, Dudek did not locate an operating site well during a site visit on January 20, 2010.

On-site water level data and boring log information is imperative to appropriately estimate the equilibrated water level at the quarry. Although Dudek did not have access to on-site water level data, water level data for sites in the vicinity of the quarry can be used to estimate the regional water table and the equilibrated water level at the quarry.

### **Off-Site Data – Otay Landfill**

Based on data from monitoring wells located at the Otay Landfill and the Otay Annex Sanitary Landfill, both located approximately one mile west of the quarry, groundwater occurs in a perched, intermediate, and deep aquifer. Groundwater within the perched aquifer is approximately 250 feet AMSL, groundwater within the intermediate aquifer is approximately 125 feet AMSL, and groundwater within the deep aquifer is approximately 85 feet AMSL. According to reports for the Otay Landfill, the perched aquifer occurs within the Otay Formation and the intermediate and deep aquifers occur within the Mission Valley Formation (GeoSyntec Consultants 2005). However, there are no deep wells at the Otay Landfill; the deep wells are

only located at the adjacent Otay Annex Sanitary Landfill. Reports for the Otay Annex Sanitary Landfill do not identify the formation in which the deep wells are screened. The groundwater elevation in the intermediate aquifer at the landfill is similar to that of the first water encountered in the quarry well (125 feet AMSL).

Two wells, OTGW-9 and OTGW-21, on the Otay Annex Sanitary Landfill are screened below 65 feet AMSL, in the deep aquifer. Wells OTGW-9 and OTGW-21 have average groundwater elevations of 107 feet AMSL and 85 feet AMSL, respectively (<https://geotracker.waterboards.ca.gov/>) as measured over the past five years. The deep aquifer is referred to as the regional aquifer by the Regional Water Quality Control Board and GeoLogic.

### **Off-Site Data – USGS Multi-Depth Well**

A United States Geological Survey (USGS) multi-depth well in the Otay River Valley is located approximately four miles west of the quarry. The USGS multi-depth well is screened over five distinct intervals ranging from 70 feet bgs to 1,460 feet bgs ([http://ca.water.usgs.gov/sandiego/wells/sdor\\_desc.html](http://ca.water.usgs.gov/sandiego/wells/sdor_desc.html)). Each well has 20 feet of screen. There is no known published information on the formations that were encountered during drilling of the multi-depth well. The top of the screen in the two shallow wells occurs at 0.85 foot AMSL and -149.15 feet AMSL, respectively. Groundwater elevations in these wells have ranged from 42.5 feet AMSL to 45.7 feet AMSL since 2008. This elevation range lies within the regional hydraulic gradient defined by the elevation of water in the deep aquifer at the Otay Annex Sanitary Landfill to the east of the USGS multi-depth well and the Pacific Ocean to the west of the USGS multi-depth well. The three deeper wells, with the top of screen starting at -479.15 feet AMSL, -879.15 feet AMSL, and -1,349.15 feet AMSL, respectively, have groundwater elevations ranging from 58 feet AMSL to 85 feet AMSL. These elevations are similar to those encountered at the Otay Annex Sanitary Landfill.

### **Potential Groundwater Elevation in the Quarry**

A range of regional hydraulic gradients can be estimated using groundwater elevations measured at the Otay Annex Sanitary Landfill, the USGS multi-depth well, and the ocean surface elevation. The estimated gradients can be used to approximate the potential elevation of groundwater in the quarry after the cessation of mining operations.

In order to estimate the regional hydraulic gradient, the groundwater flow direction is assumed to be from east to west. The USGS multi-depth well is due west of the quarry, and lies on the presumed east-west gradient. The Otay Annex Landfill wells are northwest of the quarry, and the groundwater elevations at these wells must be projected onto a line that runs east-west from the center of the quarry floor to the Pacific Ocean in order to estimate the gradient. In addition to assuming an east-west gradient, the measured groundwater elevations are assumed to represent elevations measured in a regional aquifer of similar characteristics. The sites used for the hydraulic gradient calculations (Otay Valley Quarry, Otay Landfill, and USGS multi-depth well) may, however, be located in different geologic formations. Groundwater flow and hydraulic gradients are dependent upon aquifer characteristics. If the aquifer characteristics of the different formations are not similar, if the aquifer is not connected across different formations, or if groundwater flow is affected by the La Nacion fault, estimates of the regional hydraulic gradient may not be representative.

Two different gradient scenarios are discussed below. In the first scenario the hydraulic gradient is constant from the Otay Valley Quarry to the Pacific Ocean. The gradient is calculated using the water levels at the

Otay Landfill (deep aquifer), the shallow USGS multi-depth wells, and finally the Pacific Ocean. This approach ignores the potential effects of the La Nacion fault on groundwater flow and gradient. In the second scenario, using the deeper USGS multi-depth wells, the hydraulic gradient is shallower between the Otay Valley Rock Quarry and the USGS multi-depth well and steeper to the west. This change in gradient may result from the potential effects of the La Nacion fault on groundwater flow, though insufficient data are available to determine the potential cause of a break in hydraulic gradient.

### **USGS Shallow Well Hydraulic Gradient**

The groundwater elevations in the two shallow USGS wells range from 42.5 to 45.7 feet AMSL. The groundwater elevations in the deep aquifer at the Otay Landfill range from 85 to 107 feet AMSL. The average distance from the projected locations of OTGW-9 and OTGW-21 to the USGS multi-depth well is 16,000 feet. Using this distance, a groundwater elevation of 107 feet AMSL at the landfill and a groundwater elevation of 42.5 feet AMSL at the USGS multi-depth well, the hydraulic gradient is calculated to be 0.0040 ft/ft, or 0.4 percent. This gradient is similar to the hydraulic gradient from the Otay Landfill to the Pacific Ocean. If the elevations of 85 and 45.73 feet AMSL are used, respectively, for the landfill and USGS wells, the hydraulic gradient is calculated to be 0.0025 ft/ft, or 0.25 percent.

Using the lower gradient of 0.0025 ft/ft and an approximate east-west distance of 5,000 feet from the projected Otay Landfill wells to the center of the current quarry floor, the groundwater elevation is estimated to reach 97 feet AMSL in the quarry. For the higher gradient, the groundwater elevation is estimated to reach 127 feet AMSL in the quarry.

### **USGS Deep Well Hydraulic Gradient**

The groundwater elevations measured in the three deeper USGS wells range from 58 feet AMSL to 85 feet AMSL, which are higher than those measured in the two shallow wells. The higher groundwater elevations in the deeper wells yield a lower range of hydraulic gradients between the Otay Landfill and the USGS multi-depth well. For a groundwater elevation at the multi-depth well of 85 feet AMSL and a groundwater elevation at the landfill of 85 feet AMSL, the hydraulic gradient would be 0 ft/ft. The predicted water level at the quarry would also be 85 feet AMSL. This is the minimum hydraulic gradient calculated, and would produce a minimum predicted water level at the quarry. Using the east-west distance of 5,000 feet between the landfill and the quarry, the highest gradient calculated under this scenario is 0.0031 ft/ft, or 0.31 percent, using a groundwater elevation of 58 feet at the multi-depth well and 107 feet at the landfill. The predicted groundwater elevation at the quarry from this gradient would be 122 feet AMSL.

### **Summary of Predicted Groundwater Elevations**

Based on the above calculations, the groundwater elevation at the quarry is predicted to be within the range of 85 to 127 feet AMSL.

### **4.10.2 Thresholds of Significance**

Thresholds used to evaluate potential impacts to hydrology and water quality are derived from Appendix G of the State CEQA Guidelines. Significant impacts related to hydrology and water quality would occur if the project were to:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the



production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the flow rate or amount (volume) of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood delineation map;
- Place within 100-year flood hazard area structures which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Expose people or structures to inundation by seiche, tsunami, or mudflow.

### 4.10.3 Impact Analysis

Reclamation activities associated with the proposed project are not expected to violate any water quality standards or waste discharge requirements. Reclamation activities could result in wind and water erosion leading to sediment-laden discharges to nearby water resources. The Otay River, located south of the Project Site, empties into the San Diego Bay and the Pacific Ocean. The majority of surface water flows and stormwater runoff discharges would drain into the excavated pit, which would serve as a retention basin; and no storm water within the quarry site would be diverted off-site. However, all of the southern quarry slopes trend/drain towards the Otay River.

In addition to the quarry pit serving as a retention basin, several erosion control measures and design features, including EC-1 and EC-2 as outlined in the Otay Valley Quarry Reclamation Plan Amendment, would prevent surface runoff from exiting the site. These measures are presented below and include additional sedimentation basins placed throughout the site, silt fences, berms, wattles, rock slope protection devices, temporary chevrons to divert run-on and run-off during storm events, as well as routine cleaning of accumulated sediment and debris from stormwater structural controls and drainage pipes.

**EC-1:** Reclamation operations employ the following erosion and sediment control measures (as necessary):

- Sedimentation basins
- Water truck usage and soil compaction via track walking
- Diversion of run-on and run-off through the use of temporary chevrons
- Silt fences, wattles, rock slope protection, or other sediment control devices.

**EC-2:** Preventative maintenance activities are performed as part of the SWPPP program and include the following:

- Cleaning of accumulated sediment, debris, and potential contaminants from the stormwater structural controls is conducted as needed before the start of the rainy seasons. This cleaning is done on an as-needed basis during the rainy season.
- Clearing of debris from drain inlets and drainage pipes.

All erosion control and runoff prevention measures would be implemented in accordance with the quarry's SWPPP. The SWPPP, in conjunction with the mitigation measure presented in Section 4.10.5, would reduce impacts to water quality to a less than significant level.

During reclamation activities, gasoline, diesel fuel, lubricating oil, grease, and solvents may be used on the Project Site. Although only small amounts necessary to maintain the construction equipment would be on-site at any one time, accidental spills of these materials during construction could potentially result in water quality impacts. Other potential pollutants of concern include organic compounds and heavy metals. New and waste oil, antifreeze, and hydraulic fluid are stored in above-ground storage tanks (ASTs) and smaller containers at defined storage sites for each contractor. Oil and chemical vendors and equipment operators are trained to exercise caution when driving near above-ground storage tanks, and to shut off the pump or emergency shutoff valve at the delivery truck product compartment in the event of an emergency during oil delivery to the site. In the rare event of a spill, absorbent material would be used to prevent chemicals or oils from being diverted off-site.

The potential for accidental spills of toxic substances, such as gasoline, diesel fuel, lubricating oil, grease, and solvents, would be regarded as a significant impact to water quality. Mitigation measure HYDRO-1, presented in Section 4.10.5, as well as HAZ-1 through HAZ-5 (see Section 4.13.5) is provided to further reduce potentially significant water quality impacts.

### **Groundwater Flow and Fill Rate**

Groundwater flow in the Santiago Peak Volcanics occurs within fractures in the rock. Groundwater flow through the fractures would be the primary source of water in the water body. The rate of flow through the fractures impacts the amount of time required to fill the water body to the equilibrated regional water level.

With the exception of the one site well that produced 1.5 gpm, no local data on well yields within the Santiago Peak Volcanics could be found in the public record. Well yields in the Santiago Peak Volcanics of the Lee Valley, located 13 miles northeast of the quarry, have reached as high as 100 gpm.

Well yields can vary greatly over a small area as they are dependent on the characteristics of the fractures, if any, encountered in the well. The fill time is dependent on the flow of water through fractures in the Santiago Peak Volcanics, the number and size of fractures that the quarry intersects, and the interconnectedness of these fractures in the immediate vicinity of the quarry. Without data from multiple wells at the site, calculation of the time it will take to fill the water body to its natural capacity can only be estimated.

The quarry, with a surface area of approximately 214 acres, is likely to intersect multiple fractures, with each one contributing additional flow. Multiple fractures are already visible on the quarry walls, though few of these have been water-filled fractures. Red and brown staining is visible on the fracture faces, indicating that the fractures are older than the blasting operations. If these fractures are filled with water at depths greater

than the current quarry floor, the overall flow rate into the quarry may be higher than the maximum measured rate of 100 gpm.

The final groundwater elevation at the quarry is predicted to range from a low of 85 feet AMSL to a high of 127 feet AMSL. A rough estimate of the total acre-feet that could be stored in the quarry based on the regional water table can be made, using an average estimated elevation of 106 feet AMSL. The total storage capacity of the quarry was estimated to be 14,180 acre-feet of water, based on an estimated groundwater elevation of 106 feet AMSL and the final quarry slope design.

Given this volume of water, the following flow rates would result in the respective fill times:

- A flow rate of 880 gpm would fill the water body to 106 feet AMSL in approximately ten years.
- A flow rate of 440 gpm would fill the water body to 106 feet AMSL in approximately 20 years.
- A flow rate of 175 gpm would fill the water body to 106 feet AMSL in approximately 50 years.

In addition to the flow rate from local fractures, precipitation and evaporation have the potential to affect the fill time of the water body. Annual precipitation of approximately 11 inches per year along with runoff from the surrounding slopes will add water to the water body. Annual evaporation demands, which remove water from the water body, range from 40 to 65 in/yr (inches per year) depending on the method of calculation. Potential evapotranspiration ( $ET_o$ ) rates calculated by the California Irrigation Management Information System (CIMIS) yield annual evaporation demands of 44.7 inches (dry year) and 41.45 inches (wet year) using the Penman-Monteith equation and data collected from a weather station situated near Balboa Park. In contrast, pan evaporation data collected in Chula Vista (averaging monthly values from 1948 to 2005) yield an annual evaporation demand of 63.77 inches. With pan evaporation demands often overestimating actual evaporation, and with  $ET_o$  often underestimating evaporation from a free surface, the true evaporation demand is likely to fall somewhere between 40 and 65 inches per year. However, even these values may be higher than the true evaporation demand at the quarry because the water would be within a deep pit, which will limit the sun and wind exposure, and therefore reduce the rate of evaporation. Evaporation demand is likely less than 40 to 65 inches per year.

Assuming all of the precipitation that falls over the 214 acres of the quarry contributes to the volume of water in the water body, precipitation and runoff would contribute approximately 196 acre-feet per year of water to the water body. Assuming a conservative rate of evaporation from the water body surface of 50 inches per year, the volume of water removed from the water body due to evaporation would vary from approximately 40 acre-feet per year to 320 acre-feet per year as the water body surface area increases as it fills up. In other words, when the water body is just starting to fill with groundwater (when it is at -300 feet AMSL), evaporation would only be 40 acre-feet per year. When the water body level is at -100 feet AMSL, or 200 feet deep, evaporation would account for approximately 165 acre-feet per year of water loss. When the water body is at the equilibrated water level (approximately 100 feet AMSL), evaporation would account for approximately 315 acre-feet per year of water loss.

Water added to the system from precipitation is greater than water losses due to evaporation for much of the time that the water body is filling up (until the water body level is approximately two-thirds of its estimated final water level elevation). This indicates that the water body may fill at a faster rate than estimated above. Once the water body level is approximately -50 feet AMSL (approximately two-thirds full), the fill rate may be slower than estimated above. Because water added to the system would be greater

than water removed through evaporation for the majority of the time the water body is filling up, the formation of the water body would not result in groundwater losses. The level of the water body would fluctuate with the natural fluctuations in the local groundwater table. Therefore, impact would be less than significant to the local groundwater table level.

### **Reclamation Activities**

Reclamation activities associated with the proposed project would not require dewatering; construction activities are not expected to affect groundwater supplies. Additionally, the project is not expected to encounter groundwater during grading activities and would not involve permanent pumping of groundwater, as no phase of the proposed project would require the direct extraction of groundwater. Therefore, the project would not substantially deplete groundwater supplies or directly result in a net deficit in aquifer volume. No impacts would occur.

The proposed project would involve site grading as well as cut-and-fill operations to achieve final slope ratios, which would likely alter on-site drainage patterns. These activities could potentially increase sediment-laden discharges in stormwater runoff during the rainy season. All runoff flows would be contained on-site and would not reach any portion of the Otay River or any other off-site surface water body. All water quality requirements listed in WDR Order No. 5-00-107, Water Quality Order No. 91-13-DWQ General Permit for Discharges or Stormwater Associated with Industrial Activities would be implemented to ensure less than significant impacts to erosion or siltation affecting water quality and drainage patterns.

The project would not alter the course of a stream or river as there are no streams or rivers transecting any portion of the Project Site, including the Otay River. Impacts would be less than significant.

Implementation of the proposed project would not increase the volume of stormwater runoff, as previously stated. The proposed project includes revegetation, erosion control, and stormwater prevention measures that would reduce stormwater runoff coefficients as well as contain all runoff flows on-site to be diverted to central collection ponds and retention basins. Revegetation measures would increase vegetative growth in various areas of the Project Site, thereby reducing exposed soils and erosive slopes that may contribute to sedimentation during storm events. These aforementioned water quality control measures would prevent flooding on- and off-site. All water quality requirements listed in WDR Order No. 5-00-107, Water Quality Order No. 91-13-DWQ General Permit for Discharges or Stormwater Associated with Industrial Activities would be implemented to ensure less than significant impacts to erosion or siltation affecting water quality and drainage patterns. Impacts would be less than significant.

Implementation of erosion control measures and stormwater runoff reduction measures, as previously described and as delineated in the SWPPP would prevent runoff water from exceeding capacities of existing or planned stormwater drainage systems. Runoff from precipitation would generally drain into the excavated pit, which would be backfilled and revegetated, and additional runoff flows would be contained on-site and diverted to central collection ponds and retention basins to reduce sediment-laden discharges. Erosion control measures would reduce further sedimentation during storm events and reclamation operations. Impacts would be less than significant.

The southwestern portion of the site, which is adjacent to the Otay River, is located within a 100-year flood hazard area as denoted on the City of Chula Vista's online flood map. While the Project Site is located

within flood hazard areas including the Otay River riverbed, the project does not propose housing units or structures within a 100-year flood hazard area. No impacts would occur.

As previously mentioned, the project does not propose the construction of housing or structures within a 100-year flood hazard area; thus, it would not expose people or structures to a significant risk of loss, injury, or death as a result of the failure of a levee or dam. The project is located within the dam inundation area of both the Lower Otay (Savage) Dam and the Upper Otay Dam within the California Department of Water Resources Division of Safety of Dams (DSOD) jurisdictional area. The San Diego County General Plan outlines all inundation areas and dams that have been tested to withstand seismic activity. A seismicity test conducted in 1979 determined the Lower Otay (Savage) Dam capable of resisting seismic activity. The inundation area includes the full width of the Otay River Floodplain, and according to the County's General Plan, no known development or facilities would be affected within the inundation area. The Upper Otay Dam required a capacity reduction of 810 feet as a safety measure to reduce the likelihood of failure during a seismic event. Currently, the Upper Otay inundation area includes the Lower Otay Reservoir and affected facilities and development would involve Otay Lakes Road. The County's General Plan states that, "[n]ot only is the probability of seismically induced failure very low, but the probability of a major earthquake when the reservoirs were full is lower still. Furthermore, most dams would not fail instantaneously." Therefore, impacts would be less than significant.

The Project Site is located inland and not near a lake/reservoir or the ocean; therefore, the site is not subject to seiche or tsunami. During rainy seasons, potential mudflow could occur on site; however, erosion control measures as previously outlined would reduce impacts related to mudflow to a less than significant level. Additionally, slopes would be properly compacted, graded, and revegetated, thus reducing the risk of exposed soil erosion. Moreover, the project does not propose the development of housing or structures; therefore, the project would not expose people or structures to inundation by mudflow. Impacts would be less than significant.

### 4.10.4 Level of Significance Before Mitigation

The potential for accidental spills of toxic substances, such as gasoline, diesel fuel, lubricating oil, grease, and solvents, would be regarded as a significant impact to water quality.

### 4.10.5 Mitigation Measures

The potential for accidental spills of toxic substances, such as gasoline, diesel fuel, lubricating oil, grease, and solvents, would be regarded as a significant impact to water quality. Mitigation measures HYDRO-1, as well as HAZ-1 through HAZ-4 (see Section 4.13, *Hazards/Risk of Upset*), are required to reduce potentially significant water quality impacts to below a level of significance.

**HYDRO-1:** BMPs shall be incorporated into the final plan for reclamation to be reviewed and approved by the City of Chula Vista and shall include, but not be limited to, the following:

- All construction vehicles shall be adequately maintained and equipped to minimize/eliminate fuel spillage. All equipment maintenance work shall occur on-site or within the designated construction staging area.

- Any reclamation materials that need to be temporarily stockpiled or equipment/supplies that need to be stored on-site shall be kept within the construction staging areas and shall be covered when not in use.

Design Features EC-1 and EC-2, incorporated in the Reclamation Plan Amendment, shall be complied with as set forth therein.

### **4.10.6 Level of Significance After Mitigation**

With incorporation of requirements in the proposed Reclamation Plan Amendment and implementation of mitigation measure HYDRO-1, as well as HAZ-1 through HAZ-4 (see Section 4.13, *Hazards/Risk of Upset*) would reduce impacts to hydrology/drainage/water quality to below a level of significance.





## 4.11 GEOLOGY AND SOILS

Geotechnics Incorporated conducted a comprehensive geotechnical evaluation of the slope stability of the Otay Valley Quarry. The *Preliminary Geotechnical Evaluation*, dated December 7, 2010, is summarized below and included as Appendix L.

### 4.11.1 Existing Environmental Setting

The Otay Valley Quarry is located within the Peninsula Ranges Geomorphic Province of California, which is characterized by southeast-northwest trending mountain ranges and subparallel faults, with a coastal plain of landforms in the western portion. The ranges typically consist of Jurassic to Cretaceous age metamorphic and crystalline rock and are cut by northwest trending fault-bound valleys. The Otay Valley Quarry is located on the eastern edge of the coastal plain. The quarry is positioned on the north bank of the Otay River, at the southwestern foot of Rock Mountain. (See Figure 3-1, *Site Location – USGS Map*.)

### Geologic Formations

The Otay Valley Quarry where active mining is occurring is underlain by two surficial soil types and two geologic formations. The surficial soil consists of quarry fill and alluvium. The geologic units consist of Otay Formation and Santiago Peak Volcanics. Geologic formations located on the perimeter of the mining include Stream-Terrace Deposits, Mission Valley Formation, Alluvium and Slope Wash Undifferentiated, and Otay Formation. Geologic formations underlying the Project Site are depicted in Figure 4.11-1, *Regional and Site Geology*, and Figure 4.11-2, *Site Geology Map*.

### Geologic Units

**Otay Formation (To).** Otay Formation is made up of crudely bedded silty to clayey fine sandstone, siltstone, and claystone that coarsens with depth. The formation is weakly to moderately firm, although local highly cemented zones are common. There are also relatively continuous absorptive clay layers in the upper portions of the section, as well as tongues of very coarse sand in the easternmost exposures of the formation. The stability of the formation is difficult in predicting for future exposures and should be evaluated upon encountering.

**Santiago Peak Volcanics (Jsp).** Santiago Peak Volcanics is a mildly metamorphosed volcanic rock exposed as a discontinuous belt along the western front of the Peninsular Ranges in San Diego County. These rocks are composed of relatively flat lying to slightly tilted interlayered andesitic volcanic breccias, andesitic flows, and welded breccias tuffs. The upper ten to 50 feet of the rock is moderately to intensely weathered with strong iron oxide staining and clay-lined closely spaced fractures. Fresh rock is generally exposed 50 to 60 feet below the ground surface. The stability of the volcanics is primarily controlled by discontinuities (joint sets) and thus reliant on geologic structure and rock mass properties. The majority of joints observed were typically very tight, smooth to rough, and clean. The most prevalent discontinuities were used in the slope stability analysis for slopes within the gabbro and are listed in the following table.

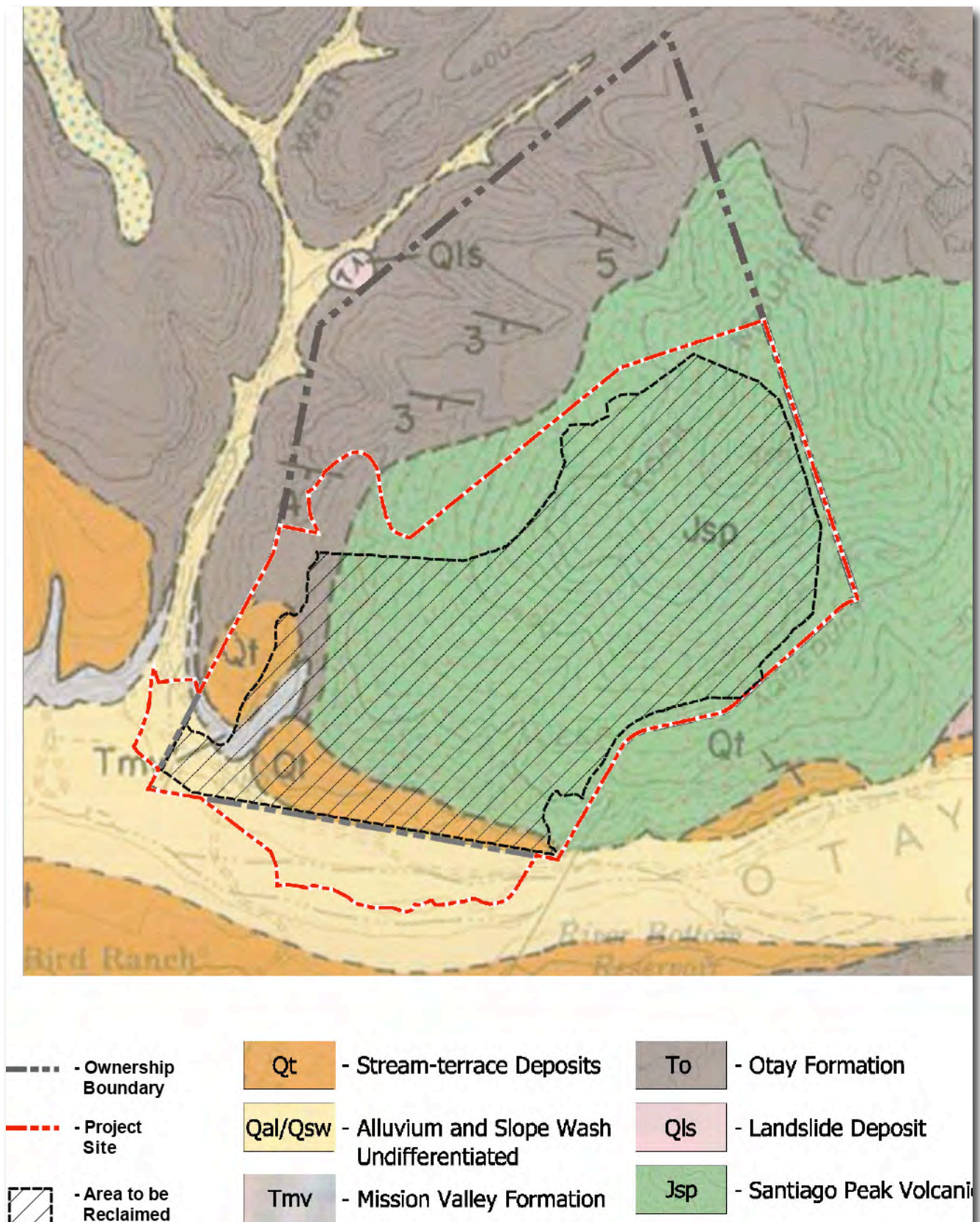


Figure 4.11-1. Regional and Site Geology



## 4.11 GEOLOGY AND SOILS

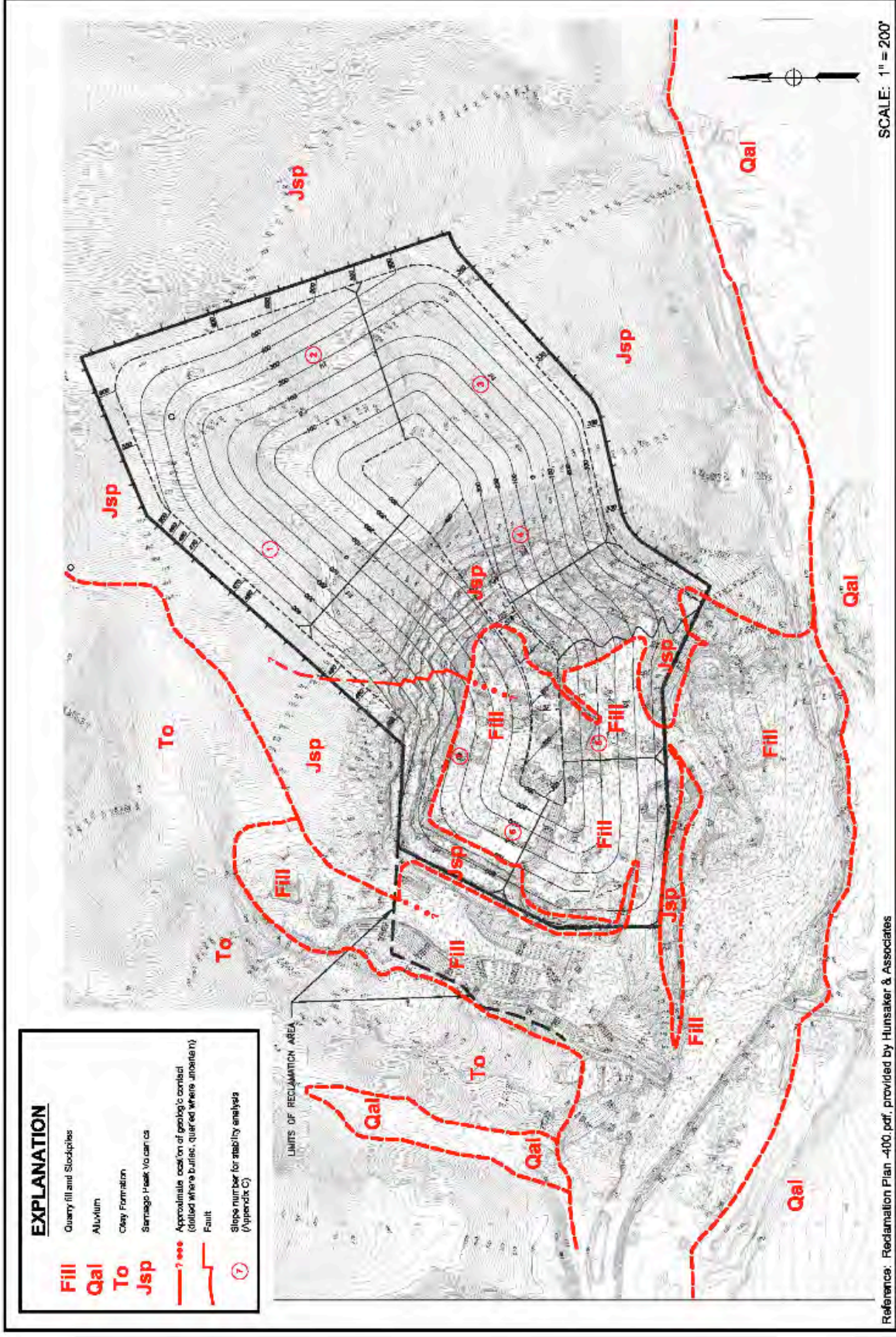


Figure 4.11-2. Site Geology Map

Dip (degrees from horizontal)	Dip Direction (degrees from north)
79	129
86	049
87	347
44	270

No significant shear zones were observed entirely within the volcanics. There is fault – an isolated feature – that dips steeply. Because the fault is an isolated feature and dips steeply, it should not significantly affect overall slope stability.

### **Groundwater**

Groundwater can be observed on the quarry floor and is increased by seeps along the northeast corner of the quarry in the rainy season, but these seeps are dry in the summer months. Geotechnics Incorporated does not anticipate that this flow or occurrence of groundwater would affect the slope stability of the quarry. (Groundwater is addressed in detail in Section 4.10, *Hydrology/Drainage/Water Quality*, of this EIR.)

### **Faults and Seismicity**

There are no known active faults underlying the site or projecting toward the site. The nearest known active fault is the Rose Canyon fault zone, which is located approximately 12 miles west of the site. The fault exposed in the quarry does not appear to offset residual soil. There are no geomorphic features evident in aerial photographs that may have been created by the fault. Geotechnics Incorporated concludes that this fault is not active.

### **Slope Stability**

The stability of the rock slopes was evaluated with the use of the Hoek-Brown Strength Criteria. The resulting Factors of Safety exceed the generally accepted 1.5.

#### **4.11.2 Thresholds of Significance**

According to Appendix G of the CEQA Guidelines, a project could have a significant effect on geology and soils if it would:

- Expose people or structures to potential substantial adverse effects involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, or landslides.
- Result in substantial soil erosion or the loss of topsoil.
- Be located on expansive soils or on a geologic unit or soil that is unstable, or that would become unstable as a result of the project.
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

### 4.11.3 Impact Analysis

The proposed project does not involve the construction of homes or other structures. Instead, the project would provide reclamation of the mined site at the conclusion of mining operations, estimated to be about 2089. Additionally, there are no known active faults underlying the site or projecting toward the site. As such, the project would not expose people or structures to potential substantial adverse effects involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, or landslides. There is potential that shallow failures in weathered rock could occur, resulting in potential risk. Implementation of mitigation measure GEO-1 in Section 4.11.5, *Mitigation Measure*, below, would reduce potential impacts to geology to a less than significant level.

Erosion control facilities would be constructed as required. Temporary measures such as silt fences, berms, hay bales or similar means to deter erosion may be employed, as necessary, at locations of identified concern over the course of operations, depending upon the particular configuration of the grading work and roadways. Such measures are to be implemented in accordance with the State and Regional Water Quality Control Board and City of Chula Vista requirements for SWPPP and the Standard Urban Stormwater Mitigation Plan (SUSMP).

Sedimentation basins would be used as the primary sediment control measures. The slopes found within the mine are either a natural rock outcropping of a stable natural stone, or an earthen slope typically lacking vegetation. The earthen slopes would be sprayed with a mobile water truck to protect slopes from wind generated erosion and track-walked as necessary for stabilization. If the soil erosion continues, vegetation would be applied using a hydroseed/spraying technique. Temporary chevrons would be put into place before a storm event in order to appropriately direct the run-off toward the sedimentation basins. Velocity dissipation devices (e.g., a physical device composed of rock, grouted riprap, or concrete rubble) would be placed at the outlet of the pipe at the stormwater sampling in order to prevent scour of the soil caused by concentrated, high-velocity flows.

The following specific design features that are included in the proposed Reclamation Plan Amendment would avoid potential erosion impacts, and impacts would be less than significant.

**EC-1:** Reclamation operations employ the following erosion and sediment control measures (as necessary):

- Sedimentation basins;
- Water truck usage and soil compaction via track-walking;
- Diversion of run-on and run-off through the use of temporary chevrons; and
- Silt fences, wattles, rock slope protection, or other sediment control devices.

**EC-2:** Preventative maintenance activities are performed as part of an approved SWPPP program and include the following:

- Cleaning of accumulated sediment, debris, and potential contaminants from the stormwater structural controls is conducted as needed before the start of the rainy seasons. This cleaning is done on an as-needed basis during the rainy season; and
- Clearing of debris from drain inlets and drainage pipes.

### 4.11.4 Level of Significance Before Mitigation

Design features incorporated as part of the proposed Reclamation Plan Amendment would avoid impacts associated with soils, and no mitigation would be required. There is potential that shallow failures in weathered rock could occur, resulting in potential risk. Implementation of mitigation measure GEO-1 listed below, would reduce potential impacts to geology and soils to a less than significant level.

### 4.11.5 Mitigation Measures

**GEO-1** Ensure that the uppermost 50 feet of slopes will be cut to a slope angle of 1:1 (horizontal to vertical) to mitigate shallow failures in weathered rock.

Design features EC-1 and EC-2, incorporated in the Reclamation Plan Amendment, shall be complied with as set forth therein.

### 4.11.6 Level of Significance After Mitigation

With the incorporation of requirement to the proposed Reclamation Plan Amendment and implementation of mitigation measure GEO-1, impacts associated with geology and soils would be reduced to below a level of significance.

## 4.12 PUBLIC SERVICES AND UTILITIES

Public services and utilities are those functions that serve residents on a community-wide basis. These functions include sewer and water services, police, fire and emergency response services, parks and recreation, schools, libraries, solid waste disposal, and gas and electricity. Provision of public services and utilities are guided by the City of Chula Vista's Threshold Standards Policy, which was adopted by City Council in November 1987. This policy establishes quality of life standards, which must be considered and evaluated when any new development project is proposed. The purpose of the policy is to ensure that the project will comply with each standard, thereby allowing the City of Chula Vista to maintain its quality of life. Standards were developed by the Threshold Standards Policy for the following facilities/services:

- Police
- Fire and Emergency Medical
- Schools
- Libraries
- Parks and Recreation Areas
- Water
- Sewer
- Traffic
- Air Quality
- Fiscal

In 1990, the City adopted a Growth Management Element as part of its General Plan. The Growth Management Element further refined the Threshold Standards Policy and established additional policies that address open space and natural resources, regional growth issues, and economic development issues. In 1991, the City of Chula Vista Growth Management Program policy and ordinance was adopted. This combined all related Growth Management policies into a single policy document and further refined the implementation process as it relates to the review and approval of individual development projects.

Included as part of the original Threshold Standards Policy, the Growth Management Program requires the cumulative impacts of growth to be evaluated on an annual basis by a Growth Management Oversight Committee (GMOC). The GMOC is comprised of nine citizens, including a representative from the Planning Commission and representatives from various interest groups and geographic areas of the City. The GMOC is responsible for annually reviewing the Growth Management Program, preparing an annual report that includes the committee's findings and recommendations, and submitting the report to the Planning Commission and City Council.

This section addresses the potential impacts that the proposed Otay Valley Quarry Reclamation Plan Amendment project would have upon public services and utilities. It should be noted that the proposed project would not be implemented until after mining at the Otay Valley Quarry ceases, which is anticipated to be 2089. While the following discussion is based on the best knowledge available at this time, the provision and availability of public services and utilities will likely change between present day and project implementation in 2089. Information provided in this section relies, for the most part, on the Public Facilities and Services Element of the City's General Plan.

### 4.11.1 Existing Environmental Setting

The Project Site is the location of an on-going mining and processing operation. Mining operations include the use of heavy vehicles and machinery to extract and process minerals. Additionally, heavy trucks



transport materials from the site. As a result, the project's current demand on public services and utilities is limited, with no use of schools, libraries, or parks and recreation facilities. The Project Site is serviced by the Chula Vista Police Department and the Chula Vista Fire Department. There is no permanent sewer present on-site, but the Project Site does have water connections.

### **Water Service**

Chula Vista has historically received the majority of its water supply from the San Diego County Water Authority (CWA). The CWA generally imports from 75 to 95 percent of this water from the Metropolitan Water District (MWD) of Southern California. Water imported to the region comes from two primary sources: the Colorado River, through the 240-mile Colorado River Aqueduct; and the State Water Project from Northern California, through the Sacramento-San Joaquin River Delta and the 444-mile California Aqueduct. These sources deliver water to the MWD, which then distributes water supplies to districts throughout the Southern California region, including the CWA. The CWA is comprised of 23 member water agencies and water districts, including two that serve Chula Vista: Otay Water District and Sweetwater Authority. A third water agency, the California American Water Company, also provides water to a small portion of the Chula Vista planning area, but is not a member of the CWA.

The three districts vary in size and age of infrastructure but are all expected to conform to the same quality and service standards established by the State Department of Health Services (DHS) and the Federal Clean Water Act. In addition to providing water supplies, these agencies provide emergency storage systems and implement conservation efforts. The Otay Valley Quarry Reclamation Plan Amendment Project Site is located within the Otay Water District.

### **Sewer Service**

The City of Chula Vista maintains and operates sewer facilities that feed into a larger regional system for treatment and disposal. Chula Vista relies on the City of San Diego Metropolitan (Metro) Sewage System for treatment and disposal of the wastewater generated within the City of Chula Vista's General Plan area. Chula Vista's current wastewater collection system consists of seven major sewer basins, including: Sweetwater and G Street Basins in the northern part of the City; Telegraph Canyon and the Main Street-Date-Faivre Basins in the southern part of the City; Bayfront Basin in the west; and Salt Creek and Poggi Canyon Basins in the east. The City currently operates and maintains approximately 400 miles of sewer pipelines, ranging in size from six inches to 48 inches in diameter, and an extensive network of manholes; metering stations; pump lifts; and lift stations. Sewer facilities closest to the Project Site include a sewer trunk located in Main Street.

### **Law Enforcement, Fire Protection, and Emergency Medical Services**

In the City of Chula Vista, fire protection and emergency medical services are provided by the Chula Vista Fire Department (CVFD), and law enforcement services are provided by the Chula Vista Police Department (CVPD). Fire stations are dispersed throughout the City, while the police force operates out of a central headquarters located in downtown Chula Vista. The current Fire Station Master Plan calls for nine fire stations, eight of which have been constructed. The Master Plan is being updated to reflect changes to respond to a revised set of performance criteria proposed in the Fire Department Strategic Plan. Therefore, the number and location of future fire stations, along with how they are equipped, will likely change before the Reclamation Plan Amendment is implemented, beginning in 2089. Currently, the Project Site is located within Beat 24. The nearest CVPD station to the Project Site is located at 315 Fourth Avenue in Chula Vista. The nearest CVFD firehouse to the Project Site is located at 1640 Santa Venetia Street in Chula Vista.

### **Schools**

Two school districts serve the City: Chula Vista Elementary School District (CVESD) operates kindergarten through sixth grade, and Sweetwater Union High School District (SUHSD) operates junior and senior high schools and ancillary programs. The CVESD operate 42 schools and the SUHSD operated 26 schools, both within and outside the boundaries of the City of Chula Vista. Both districts actively plan for modernization and expansion of campuses to accommodate anticipated increases in enrollments.

Higher education is available through Southwestern Community College. The City is also pursuing development of a four-year college or university and has identified approximately 1,250 acres in the Otay Ranch/Salt Creek area of the City as a site for a potential institution of higher education.

### **Parks and Recreation**

The City of Chula Vista is served by a variety of park facilities. Regional parks are large open space and recreational facilities and include uses such as public golf courses, beaches, lakes, trails, campgrounds, and wildlife refuges. Community parks, designed to serve more than one neighborhood, are ideally 30 or more acres and provide a wide variety of facilities including: swimming pools, playing fields, recreation centers, cultural centers, and picnic areas. The City's six community parks range in size from 15 to 60 acres. Special purpose parks may vary in size up to 30 acres or more, contain specialized facilities or themes, and serve the entire City. Neighborhood parks, intended to serve local residents, range in size from five to 15 acres, and include open play space, playing fields, play equipment, and picnic areas. Mini-parks consist of both public and private facilities; are typically less than four acres in size; serve a smaller number of homes; and contain very limited facilities, such as a tot lot or play structure and some grass play area.

Public mini parks are typically located in the older western portion of the City. Private mini-parks, including common useable open space areas, are typically located east of I-805 in new master planned communities and are not considered for public park credit. Urban parks are generally located in urban downtown areas and may contain facilities such as public plazas, tot lots, play structures, public art features, sports courts (such as basketball or tennis), walking/jogging trails, dog walk areas, picnic or seating areas, some grass play area, and trees. Recreation facilities are generally located within community parks, and include community centers, gymnasiums, swimming pools, youth centers, and senior centers. The closest public park to the Project Site is the Otay Valley Regional Park Area 10, located to the south of the Project Site.

### **Solid Wastes Disposal**

The City of Chula Vista has established an agreement with Pacific Waste Services for the removal, conveyance, and disposal of any non-recyclable waste. Pacific Waste's parent company, Allied, owns and operates both the Otay Landfill and the Sycamore Canyon Landfill located further north in San Diego County. Most of the solid waste generated in the City is disposed at the Otay Landfill. The Otay Landfill is estimated to reach capacity in the year 2027. At this time, there is one proposed new landfill site in San Diego County: Gregory Canyon, located in north county, near the communities of Fallbrook, Vista, and Pauma Valley. The 1,770-acre Gregory Canyon site is designed for a 30-year life expectancy.

### 4.11.2 Thresholds of Significance

#### **Water Service**

According to Appendix G of the CEQA Guidelines, a project could have a significant adverse impact on water services if:

- There are insufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed; or
- The project cannot be served from existing entitlements and resources and would require the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

In accordance with the City's Threshold Standards Policy, the following are also required in regard to water service:

1. Developer will request and deliver to the City a service availability letter from the Water District for each project.
2. The City shall annually provide the San Diego County Water Authority, the Sweetwater Authority, and the Otay Municipal Water District with a 12 to 18 month development forecast and request an evaluation of their ability to accommodate the forecast and continuing growth. The Districts' replies should address the following:
  - a. Water availability to the City and Planning Area, considering both short and long term perspectives.
  - b. Amount of current capacity, including storage capacity, now used or committed.
  - c. Ability of affected facilities to absorb forecast growth.
  - d. Evaluation of funding and site availability for projected new facilities.
  - e. Other relevant information the District(s) desire(s) to communicate the City and GMOC.

#### **Sewer Service**

Based on Appendix G of the CEQA Guidelines, a project could have a significant adverse impact on sewer services if it would:

- Exceed wastewater treatment requirements of the San Diego Regional Water Quality Control Board;
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Require sewer service where additional sewage treatment capacity is not presently available.

Additionally, the City's Threshold Standards Policy requires the following in regards to sewer service:

1. Sewage flows and volumes shall not exceed City Engineering Standards as set forth in the Subdivision Manual adopted by City Council Resolution Number 11175 on February 12, 1983, as may be amended from time to time.

2. The City shall annually provide the San Diego Metropolitan Sewer Authority with a 12 to 18 month development forecast and request confirmation that the projection is within the City's purchased capacity rights and an evaluation of their ability to accommodate the forecast and continuing growth, or the City Engineering Department staff shall gather the necessary data

### **Law Enforcement, Fire Protection, and Emergency Medical Services**

According to Appendix G of the CEQA Guidelines, a project could have a significant adverse impact on law enforcement, fire protection, and emergency medical services if the project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered facilities, need for new or physically altered facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for these public services.

According to the City of Chula Vista's Quality of Life Threshold Standards, the proposed project would have direct adverse impacts on police protection if the proposed project would result in the CVPD's inability to implement the following regulations:

1. Properly equipped staff and police units shall respond to 81 percent of "Priority One" emergency calls within seven minutes and maintain an average response time to all "Priority One" emergency calls of 5.5 minutes or less.
2. Response to 57 percent of "Priority Two" calls within seven minutes and maintain an average response time to all "Priority Two" calls of 7.5 minutes or less.

According to the City of Chula Vista's 2003 GMOC Report, the proposed project would have direct adverse impacts on fire and emergency medical services if the proposed project would not implement regulations set forth from the following criteria:

- Properly equipped and staffed fire and medical units shall respond to calls throughout the City within seven minutes in 80 percent of cases (measured annually).

### **Schools**

According to Appendix G of the CEQA Guidelines, a project could have a significant adverse impact on schools if the project:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives.

### **Parks and Recreation**

According to Appendix G of the CEQA Guidelines, a project could have a significant adverse impact on parks and recreation if it:

- Cannot be served from existing resources and would require the construction of new facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

### **Gas and Electricity (Energy)**

A project could have a significant adverse impact on the environment if it would:

- Use fuel or energy in a wasteful manner.

A project could also have a significant adverse impact on power and gas services, according to the City of Chula Vista's Quality of Life Threshold Standards, if the project:

- Cannot be served from existing resources and would require the construction of new facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Disrupts existing service or causes utility agencies to provide inadequate levels of service.

### **Solid Waste Disposal**

According to Appendix G of the CEQA Guidelines, a project could have a significant adverse impact on the environment if it:

- Cannot be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Does not comply with federal, state, and local statutes and regulations related to solid waste.

### **4.11.3 Impact Analysis**

The final use of the Project Site for purposes of this EIR is a revegetated open space with a naturally-recharging water body. As with the current on-going mining operations, the proposed project would continue to have no demand for library, school, and parks and recreational services. No sewer services would be necessary and water demand would be less than significant as only minimal amounts of water would be necessary to establish proposed vegetation. The project is within the jurisdiction of Chula Vista police and fire services; however, upon final reclamation, these services are not likely to be utilized often, if at all.

### **Water Service**

The proposed Project Site would not require access to new public water supplies, or the construction of new public water treatment or storage facilities. The revegetation process would not require additional water supplies beyond water volumes needed for initial plant propagation. No additional demand on water supply would be required following completed reclamation activities since the proposed project would not result in an increase in the local or regional population. Since no water supplies would be required on-site, no new entitlements or resources would be needed. Therefore, no impacts would occur.

### **Sewer Service**

The project does not propose new housing or structures, and no part of the reclamation process would otherwise increase the local population of Chula Vista or the regional population of San Diego County. As

such, there would not be a need for wastewater services to the site, nor would there be a need for any long-term water services, as plants incorporated into the revegetation process would not require additional water following reclamation. Therefore, the project would not result in the need for additional wastewater treatment capacity or construction of new water or wastewater facilities. No impacts would result.

### **Law Enforcement and Fire Protection**

The project does not propose the construction of new housing or building structures, and therefore would not result in an increase in the residential population. As such, the proposed project would not place a greater demand on current City fire, police, or emergency medical services. There would be no need for additional personnel, vehicles, related equipment, or expansion of facilities. Additionally, proposed reclamation activities would not result in an increase in call volume or responses to the area, as no new residents would be generated as a result of the project.

Entrance to the site area would be regulated via a locked gate, restricting site access to those involved in on-going mining operations, as well as subsequent reclamation workers and personnel. All traffic entering the site from public streets would be monitored at this gate and site access would only be granted during daytime hours. Potential hazards present on-site have been denoted on warning signs placed at 200-foot intervals around the Project Site to inform the public of potential hazards and hazardous materials associated with mining operations and reclamation activities. Should illegal trespassing occur on-site, the Chula Vista Police Department would be the responding agency.

Reclamation activities would include revegetation of the project area to ensure slope stability and erosion control, including the incorporation of native plant mixtures and grasses. In the unlikely event of a lightning strike that could result in the need for large-scale fire suppression, the Chula Vista Fire Department would be the responding agency.

Impacts to law enforcement, fire protection, and emergency medical services are considered less than significant.

### **Schools**

Reclamation activities would not result in the need for new housing development or structures that would otherwise increase the population of San Diego County or the City of Chula Vista. Since the project does not propose housing and therefore an increase in student population, impacts to existing schools or the need for additional schools would not result.

### **Parks and Recreation**

Reclamation activities would not impact local parks, nor would they necessitate the construction of additional parkland in the County of San Diego or the City of Chula Vista, as the project would not generate the need for new housing development that would otherwise increase the local or regional population. No impacts would result.

### **Gas and Electricity (Energy)**

The proposed project would not result in the excessive use of gas, electricity, or other energy sources. The project's minimal energy needs would be served by existing providers [such as San Diego Gas and Electric (SDG&E)], and no new services would be required. The project would not result in the disruption of

existing service or cause utility agencies to provide inadequate levels of service. No impacts to energy would result from the proposed project.

### **Solid Wastes Disposal**

Reclamation activities for the proposed Project Site would include backfilling and compaction, recontouring, surface and slope stabilization, erosion control, revegetation, stream protection, grading, drainage and water diversion, topsoil salvage and redistribution, and equipment removal. Equipment to be removed would include a front-end wheel loader, dozers, portable water pumps, and a motor grader. These activities would not generate long-term solid waste that would impact landfill capacities. Revegetation would involve the propagation of native grasses and plants with the use of existing on-site stockpiles comprised of excavated silts, clays, and sands, thus diverting these soil stockpiles from local landfills. Therefore, impacts would be less than significant.

The proposed project would not violate any adopted Federal, State, and local policies and regulations related to solid waste. CCR Section 3502(b) requires a discussion of equipment removal within the reclamation plan, and CCR Section 3709(b) requires the dismantling and removal of structures if not required for end use. As previously mentioned, equipment to be removed would include a front-end wheel loader, dozers, portable water pumps, and a motor grader. The demolition materials and debris resulting from dismantling on-site structures would be minimal and would therefore not impact City or County landfill capacities. It is possible that solid waste disposal, though minimal, could involve hazardous materials; however, the project would be required to follow all Federal, State, and local regulations regarding solid waste disposal. Therefore, compliance with these regulations would result in a less than significant impact.

### **4.11.4 Level of Significance Before Mitigation**

The proposed project would not result in significant impacts associated with public services and utilities. No mitigation measures are required.

### **4.11.5 Mitigation Measures**

No mitigation measures are required.

### **4.11.6 Level of Significance**

No mitigation measures are required, because impacts associated with public services and utilities would be less than significant.



## 4.13 HAZARDS/RISK OF UPSET

This section evaluates the potential impacts of the proposed project on hazards and hazardous materials. Impacts to hazards and hazardous materials were analyzed based on the Chula Vista General Plan, the Chula Vista General Plan EIR (2005), the Otay Ranch Program EIR, an Otay Quarry Environmental Data Resources (EDR) search (Dudek 2010), and review of historical documents.

### 4.13.1 Existing Environmental Setting

The proposed project involves the reclamation of approximately 197 acres of the 278-acre Otay Valley Quarry. The site is within the City's MSCP Subarea Plan and part of the San Diego County MSCP Subregional Plan, which is a blueprint for the conservation of habitats and the preservation of natural vegetation communities in San Diego County. Zoning of the property (as outlined in the Chula Vista General Plan) is "P-C Planned Community," which provides for a variety of urban uses, including commercial, industrial, residential, recreational, and open space. The existing land use over the property is mining and undeveloped mineral reserve, bordered on the east, south, and west by open space/preserve land uses and on the north by industrial land uses. Areas of potential hazards in the project vicinity include the Otay Landfill and several automobile salvage yards. Additionally, the project is within a High Wildlife hazard area as designated by California Department of Forestry and Fire Prevention, which means it may contain substantial forest fire/wildfire risks and hazards (City of Chula Vista General Plan EIR, 2005).

The Project Site is the location of an on-going mining and resource extraction and processing operation. Commonly used hazardous substances, such as fossil fuels, oil, lubricants, welding solutions, and solvents are used on-site for heavy equipment operation and maintenance.

### ***Environmental Database Findings***

Dudek, Inc. conducted an Environmental Data Resources search, which consists of a computerized database search of regulatory agency records and available historical source information, to assess potential environmental impacts to the subject property. Dudek reviewed a government records search conducted by EDR on February 18, 2010. The EDR report listed one site (the subject property) within the American Society for Testing and Materials (ASTM) standard search radius of the Otay Quarry. The subject property is listed on the Emergency Response Notification System (ERNS) database for an accidental spill that occurred in November 1999. Approximately 100 gallons of diesel fuel spilled during the re-fueling of a vehicle. The ERNS database reports that the contaminated soil and oil was cleaned-up, and that the National Response Center was notified. Due to the notification of regulatory agencies, the reported clean-up of the soil, the quantity of the discharge (100 gallons), the impact to soil only, and the amount of time that has passed since the spill (almost 12 years), the potential environmental impacts remaining today are likely insignificant.

The EDR report identified 43 sites located in Chula Vista that were not mapped due to limited address information. Forty of those sites are located greater than one mile from the subject property. Two of the sites are located within or immediately adjacent to the subject property: Rimrock and Chula Vista Raceway. Both Rimrock and Chula Vista Raceway were identified on the NPDES database due to storm water controls associated with construction or operation of the sites. Neither site was listed on a database that would indicate an unauthorized release occurred on or adjacent to the subject property. One additional site, Otay Landfill, is located within one mile of the subject property. The Otay Landfill, located at 1700

Maxwell Rd, approximately one mile northwest of the subject property, is listed on the California Hazardous Material Incident Report System (CHMIRS) and Emissions Inventory Data (EMI) databases. The CHMIRS database contains information on reported hazardous material incidents. The incident for the Otay Landfill is listed as occurring in 1989. No information was provided regarding the substance or quantity released. The incident was reported and closed on the same day, January 2, 1989. The EMI database contains information regarding toxic and criteria pollutant emissions and air emission permits.

In addition, the Third Quarter 2009 Groundwater Monitoring Report for the Otay Landfill was also reviewed. Based on the groundwater flow direction and the locations and contaminant concentrations of the site wells, the groundwater contamination from the Otay Landfill does not appear to have impacted the subject property.

### **Historic Land Use**

In addition to the EDR review, the Otay Ranch Program EIR, historical aerial photographs, topographic maps, City directories, and Sanborn Fire Insurance maps were reviewed to identify potential evidence of recognized environmental conditions at the subject property.

The Otay Ranch Program EIR identifies the Otay Ranch area as a “generally undeveloped area used for dry farming, cattle production, quarrying, and private recreation; several regional utility facilities cross the site.” Soil samples in the southwestern portion of Otay Ranch, where the Otay Valley Quarry is located, were found to have acceptable levels of pesticides, but had evidence of petroleum hydrocarbon contamination. Waste oil and fuel spillage, residual blasting chemicals, and air emissions from quarry operations are listed as potential causes of contamination, as well as past disposal of hazardous waste at the Otay Landfill.

The aerial photographs reviewed were from 1953, 1964, 1974, 1989, 1994, 2002, and 2005. The subject property appears primarily undeveloped in the 1953 photograph, with some dirt roads visible on the property. Potential quarry activities and grading are visible on the southern portion of the subject property (adjacent to the Otay River) in the 1964 and 1974 photographs. The quarry mining operations extend northward onto Rock Mountain in the 1989 photograph, while the 1994 photograph shows the quarry deepening. The 2005 photograph shows ponded water at the bottom of the quarry. The subject property is adjoined by unimproved land to the north, east, and west, and the Otay River to the south, with the exception of agricultural land within portions of the Otay River floodplain (south and west) and across Wolf Canyon (west-northwest). Agriculture appears on the north bank floodplain of the Otay River, just downstream from the subject property (less than one-quarter mile west-southwest of the subject property), in the 1964 and 1974 photographs. Across the river from this location, more extensive agriculture appears on the floodplain for all photographs available (1953-2005) (less than one-quarter mile southwest of the subject property). In the 1989 photograph, the land west and northwest the subject property appears to have been converted into agricultural land (less than one-quarter mile west-northwest of the subject property). The aerial photographs did not indicate evidence of recognized environmental conditions at the subject property.

The historical topographic maps reviewed were from 1903, 1904, 1955, 1971 (photo-revised from 1955), and 1996 and had scales ranging from 1:250,000 to 1:24,000. The subject property was depicted as undeveloped land from 1903 through 1971. By 1996, the subject property is labeled as a pit. The subject property area is shaded in to denote the extent of the pit. The Otay River Valley is depicted on the southern

adjoining property in the topographic maps. The topographic maps did not indicate evidence of recognized environmental conditions at the subject property.

Dudek requested Sanborn Fire Insurance maps from EDR; however, they were not available for the subject property. Historical City Directories were obtained from EDR for the years 1980 through 2007; however, no listings were available for the subject and adjoining properties.

Based on the 1999 spill of diesel fuel during vehicle refueling, diesel fuel was previously used on-site. As the site use has not changed, it is likely that diesel fuel is still used on-site. Additionally, it is likely that there are equipment maintenance areas on-site where chemicals are used. However, the site is not listed on the County of San Diego Department of Environmental Health's Hazardous Materials Database as a site with hazardous waste and materials storage. Therefore, it appears that the site does not have permanent hazardous materials storage of greater than 55 gallons.

### **Regulatory Framework**

Hazardous materials and wastes are identified and defined by Federal and State regulations for the purpose of protecting public health and the environment. Hazardous materials have certain chemical, physical, or infectious properties that cause them to be considered hazardous. Hazardous wastes are defined in the code of Federal Regulations Title 40 Part 20 and also in the CCR Title 22, Division 4.5, Chapter 11, Article 1, Section 66261. Over the years, the laws and regulations have evolved to deal with different aspects of the handling, treatment, storage, and disposal of hazardous substances.

### **Federal Regulations**

The Federal Toxic Substances Control Act of 1976 and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the U.S. EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by HSWA.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by the United States Congress on December 11, 1980. This law provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for clean up when no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases or threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List (NPL), which is a list of contaminated sites warranting further investigation by the U.S. EPA. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

The EPA released Guidelines for Ground-Water Classification Under the EPA Ground-Water Protection Strategy, defining protection policies for three classes of groundwater based on their respective value and their vulnerability to contamination. Under these guidelines, facilities located in areas where existing groundwater contamination is suspected, an appropriate groundwater impact study is a part of the

environmental review and provides increased spill containment and inspection measures in addition to other identified mitigation.

The 1972 Federal Water Pollution Control Act (also referenced as the Clean Water Act) established a federal framework for the regulation of water quality.

### **State Regulations**

#### **California Hazardous Waste Control Law (HWCL)**

The California Hazardous Waste Control Law (HWCL) is administered by Cal-EPA to regulate hazardous wastes. While the HWCL is generally more stringent than RCRA, until the U.S. EPA approves the California program, both the State and Federal laws apply in California. The HWCL lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

CCR Title 22, Chapter 11, Article 2, Section 66261.10 defines hazardous waste as a substance that may: (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed or otherwise managed. According to CCR Title 22, substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous waste. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, or contaminated or is being stored prior to proper disposal.

Toxic substances may cause short-term or long-lasting health effects, ranging from temporary effects to permanent disability or death. For example, toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substance involved). Carcinogens (substances known to cause cancer) are a special class of toxic substances. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). Ignitable substances are hazardous because of their flammable properties. Gasoline, hexane, and natural gas are examples of ignitable substances. Corrosive substances are chemically active and can damage other materials or cause severe burns upon contact. Examples include strong acids and bases such as sulfuric (battery) acid or lye. Reactive substances may cause explosions or generate gases or fumes. Explosives, pressurized canisters, and pure sodium metal (which reacts violently with water) are examples of reactive materials.

Other types of hazardous materials include radioactive and biohazardous materials. Radioactive materials and wastes contain radioisotopes, which are atoms with unstable nuclei that emit ionizing radiation to increase their stability. Radioactive waste mixed with chemical hazardous waste is referred to as “mixed wastes.” Biohazardous materials and wastes include anything derived from living organisms. They may be contaminated with disease-causing agents, such as bacteria or viruses.

The Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires that any business that handles hazardous materials prepare a business plan that must include details,

including floor plans, of the facility and business conducted at the site, an inventory of hazardous materials that are handled or stored on the site, an emergency response plan, a training program in safety procedures and emergency response for new employees, and an annual refresher course in the same topics for all employees.

The Porter-Cologne Water Quality Act (California Water Code, Section 13000 et seq.) established the authority of the SWRCB and provided the RWQCB with the primary responsibility of the protection of water quality in the State of California.

### **Hazardous Materials Worker Safety**

The California Occupational Safety and Health Administration (Cal-OSHA) and the Federal Occupational Safety and Health Administration (Fed-OSHA) are the agencies responsible for assuring worker safety by developing and enforcing workplace safety regulations in the handling and use of chemicals in the workplace. Cal-OSHA standards are generally more stringent than Federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR Sections 337–340, Chapter 3.2). The regulations specify requirements for employee training, availability of safety equipment, accident prevention programs, and hazardous substance exposure warnings.

### **Handling and Storage of Hazardous Materials**

The handling and storage of hazardous materials is regulated on the Federal level by the U.S. EPA under the CERCLA as amended by SARA. Under SARA Title III, a nationwide emergency planning and response program was established that imposed reporting requirements for businesses that store, handle, or produce significant quantities of hazardous or acutely toxic substances as defined under federal laws. SARA Title III required each state to implement a comprehensive system to inform federal authorities, local agencies, and the public when a significant quantity of hazardous, acutely toxic substances are stored or handled at a facility.

In California, the handling and storage of hazardous materials is regulated by Chapter 6.95 of the California Health and Safety Code. Under Sections 25500–25543.3, facilities handling hazardous materials are required to prepare a Hazardous Materials Business Plan. The business plan provides information to the local emergency response agency regarding the types and quantities of hazardous materials stored at a facility and provides detailed emergency planning and response procedures in the event of a hazardous materials release. In the event that a facility stores quantities of specific acutely hazardous materials above the thresholds set forth by the California code, facilities are required to prepare a Risk Management Plan and California Accidental Release Plan, which provide information on the potential impact zone of a worst-case release, and requires plans and programs designed to minimize the probability of a release and mitigate potential impacts.

### **Transportation of Hazardous Materials**

Transportation of hazardous materials is regulated by the U.S. Department of Transportation's Office of Hazardous Materials Safety (OHM). The OHM formulates, issues, and revises hazardous materials regulations under the Federal Hazardous Materials Transportation Law. The hazardous materials regulations cover hazardous materials definitions and classifications, hazard communications, shipper and carrier operations, training and security requirements, and packaging and container specifications. The hazardous materials transportation regulations are codified in 49 CFR Parts 100–185.

The hazardous materials transportation regulations require carriers transporting hazardous materials to receive required training in the handling and transportation of hazardous materials. Training requirements include pre-trip safety inspections, use of vehicle controls and equipment including emergency equipment, procedures for safe operation of the transport vehicle, training on the properties of the hazardous material being transported, and loading and unloading procedures. All drivers must possess a commercial driver's license as required by 49 CFR Part 383. Vehicles transporting hazardous materials must be properly placarded. In addition, the carrier is responsible for the safe unloading of hazardous materials at the site, and operators must follow specific procedures during unloading to minimize the potential for an accidental release of hazardous materials.

Asbestos-containing materials are regulated as a hazardous air pollutant under the Clean Air Act and by Cal-OSHA. The San Diego Air Pollution Control District, through the authority of CARB and Cal-EPA, is primarily responsible for enforcing asbestos regulations.

### **Regional and Local**

#### **San Diego County**

The San Diego County Department of Environmental Health (DEH) Hazardous Materials Management Division (HMMD) is responsible for regulating hazardous materials business plans and chemical inventory, hazardous waste permitting, underground storage tanks (USTs), and risk management plans. The goal of HMMD is to protect human health and the environment by ensuring that hazardous materials, hazardous waste, medical waste, and USTs are properly managed. To accomplish this goal, the HMMD has several programs working with the regulated community and the public, which include the California Accidental Release Prevention Program, the Hazardous Incident Response Team, the Hazardous Materials Duty Desk, the Pollution Prevention Specialist, and the Underground Storage Tank Group.

The Land and Water Quality Division of DEH is responsible for administering the Site Assessment and Mitigation Program, which oversees environmental investigations and remedial actions, primarily those related to USTs, to protect health and water resources within San Diego County.

Each City within the County is required to adopt necessary provisions to implement the San Diego County Hazardous Waste Management Plan (COHWMP). Its principal goal is to “establish a system for managing hazardous materials, including wastes; to protect public health, safety, and welfare; and maintain the economic viability of San Diego County.” The COHWMP serves as the primary planning document providing overall policy direction toward the effective management of hazardous waste within San Diego County through establishment of goals, policies, and implementation measures. The City of Chula Vista incorporates the COHWMP into the Public Facilities Element of the General Plan (2005) and prescribes more specific, or stringent, planning requirements and siting criteria reflective of local conditions to ensure the protection of public health, safety, and welfare, and environmental resources within the City of Chula Vista.

The Water Quality Control Plan for the San Diego Basin (9) [(Basin Plan) SWRCB 1994] establishes policies and requirements for the protection of groundwater and surface water quality in the region. The Basin Plan also summarizes drinking water standards as specified in the California Department of Health Services, the California Inland Surface Waters Plan (SWRCB 1991), and Title 40 CFR Part 131, which establishes federal water quality standards under the CWA.

### 4.13.2 Thresholds of Significance

Thresholds used to evaluate potential impacts to hazards and hazardous materials are derived from Appendix G of the State CEQA Guidelines. Significant impacts related to hazards and hazardous materials would occur if the project were to:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

### 4.13.3 Impact Analysis

Reclamation activities on the Project Site would involve the transport of gasoline and other materials during grading and other reclamation operations, including the operation of heavy equipment. Relatively small amounts of commonly used hazardous substances, such as fossil fuels, oil, lubricants, welding solutions, and solvents, would be used on-site for heavy equipment operation and maintenance. These materials would be transported and handled in accordance with all Federal, State, and local laws regulating the management and use of hazardous materials. The use, storage, and disposal of any hazardous materials on or from the Project Site shall be done in compliance with applicable Federal, State, and local regulations including, but not limited to, Titles 8, 19, 22, and 26 of the Code of California Regulations; Uniform Fire Code; Chapter 6.95 of the California Health and Safety Code; and the San Diego County Hazardous Waste Management Plan. Consequently, use of these materials for their intended purpose would not pose a significant risk to the public or environment.

Other hazardous materials such as new and waste oil, antifreeze, and hydraulic fluid are stored in ASTs and smaller containers at defined storage sites for each contractor. Oil and chemical vendors and equipment operators are trained to exercise caution when driving near above-ground storage tanks, and to shut off the pump or emergency shutoff valve at the delivery truck product compartment in the event of an emergency during oil delivery to the site.



The following action included in the Reclamation Plan Amendment would be implemented in accordance with Federal, State, and local requirements for SWPPPs to minimize inadvertent contamination of groundwater during operations:

**GW-1** Fuel or other chemicals present on the mine site will be handled and stored using appropriate containment to prevent accidental spillage into open water bodies.

Additionally, mitigation measures HAZ-1 through HAZ-4, presented in Section 4.13-5, below, would be required to reduce impacts to below a level of significance.

Once reclamation is complete, the transport, use, or disposal of hazardous materials would be limited to small amounts involved in routine maintenance of the site. Although limited quantities of these hazardous materials are expected to be used during reclamation, as well as during maintenance activities, these types of activities generally do not entail the use of such substances in quantities that would present a significant hazard to the environment or the public at large. Accidents and spills involving small quantities of these materials that may occur at individual sites would not create a significant hazard to the public or the environment. Impacts would thus be less than significant with mitigation incorporated.

As previously noted, reclamation activities on the Project Site would involve the transport of gasoline and other materials to the site during grading and other reclamation operations. Relatively small amounts of commonly used hazardous substances, such as fossil fuels, oil, lubricants, welding solutions, and solvents would also be used on site for heavy equipment operation and maintenance. These materials would be transported and handled in accordance with all federal, state, and local laws regulating the management and use of hazardous materials.

Accidents and spills involving small quantities of these materials that may occur at individual sites would not create a significant hazard to the public or the environment, however small quantities of petroleum compounds and metals could be released in the rare event of a spill or leak from equipment use or removal. In the rare event of a spill, absorbent material would be used to prevent chemicals or oils from being diverted off site. In addition, design feature GW-1 as well as mitigation measures HAZ-1 through HAZ-4 presented in Section 4.13-5, below, would reduce impacts resulting from hazardous materials spillage or leaking to a less than significant level. Therefore, impacts would be less than significant with mitigation incorporated.

The proposed Reclamation Plan Amendment would result in the creation of a water body, which would fill naturally with water over time. While the water body is shallow, a potential exists for vectors. This would be regarded as potentially significant, if not monitored and appropriately controlled. Monitoring of the water body would be required to ensure that vector population does not reach a level which would cause a significant health hazard and will be controlled as applicable.

The Project Site is not located within 0.25 miles of an existing or proposed school facility. No impact would occur.

The Department of Toxic Substances Control (DTSC) maintains a “Cortese” list, which is a database of hazardous materials sites throughout the state. The Project Site is not included on this list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; therefore, the proposed project

would not create a significant hazard to the public or the environment (DTSC 2009). No significant impacts to the environmental condition of the Project Site were discovered during the EDR search. As a precaution, restricted access would be granted during and after reclamation activities to limit the number of people on-site and to ensure the safety of those involved in reclamation operations. No impacts would occur.

The Project Site is located within the vicinity of the Brown Field Municipal Airport, and is situated within the airport's overflight zone. Reclamation activities would not result in a safety hazard for people working within the Project Site and would not conflict with the airport land use plan in a manner that would result in safety hazards for people working in the project vicinity. No impacts would occur.

The Project Site is not located within the vicinity of a private airstrip. No impacts would occur.

The proposed project would not impair implementation of or physically interfere with an adopted emergency response or evacuation plan, as reclamation equipment staging areas would be restricted to on-site locations, and public roadways would not be impeded by reclamation operations or equipment that may interfere with emergency vehicles. Traffic disruption on I-805 due to reclamation machinery would be minimal and if it were to occur, would be temporary in nature. Moreover, heavy equipment operations and locations would not vary significantly from current mining activities on site. Therefore, impacts to emergency response and/or evacuation plans would be less than significant.

As previously noted, the project does not propose the construction of buildings or structures, and as such would not expose people or structures to significant risks involving wildland fires. Reclamation activities would include backfilling and compaction, recontouring, surface and slope stabilization, erosion control, revegetation, stream protection, grading, drainage and water diversion, topsoil salvage and redistribution, and equipment removal. None of these actions would serve to enhance the risk of injury or damage due to wildfire. Impacts would be less than significant.

### **4.13.4 Level of Significance Before Mitigation**

Prior to mitigation, there is the potential for the project to have significant impacts due to hazards and hazardous materials.

### **4.13.5 Mitigation Measures**

The following mitigation measures would be required to reduce potential impacts resulting from hazardous materials spillage or leaking to a less than significant level.

- HAZ-1** All equipment refueling and maintenance shall be restricted to designated staging areas located away from drainages to avoid inadvertent releases from heavy equipment vehicles or supplies from entering surface water bodies. Additionally, heavy equipment and vehicles shall be inspected for leaks on a daily basis.
- HAZ-2** Retention basins shall be installed in appropriate locations on the Project Site to prevent sediment-laden runoff, particularly in areas of exposed soils located within 10 feet of a drainage feature. Other sedimentation control features may include filter berms, straw base barriers, filter inlets, and vegetative swales.

**HAZ-3** All reclamation staging areas shall include surface runoff reduction measures to contain hazardous materials such as oil, grease, or fuel products from being diverted off site or toward receiving waters. Should heavy equipment be stored overnight, particularly near drainage areas, drip plans shall be installed beneath machinery engine blocks and hydraulic systems.

**HAZ-4** A Spill Prevention Control and Countermeasure Plan shall be prepared and implemented should unanticipated releases of hazardous materials occur. The plan shall identify all hazardous materials (e.g., fuels, solvents) that would be present on any portion of the construction area and Project Site. Contingency analysis and planning shall be presented to identify potential spill or accident situations, how to minimize their occurrence, and how to respond should they occur. The plan shall also identify spill response materials (e.g., absorbent pads, shovels) to be kept at the construction site and their locations. All construction personnel shall receive training regarding the appropriate work practices necessary to effectively comply with the applicable environmental laws and regulations, including without limitation, hazardous materials spill prevention and response measures.

**HAZ-5** As the water body fills with water, monitoring and control for vectors shall occur at intervals of every six months, or as described by the local vector control agency. Monitoring activities may cease upon 50 percent fill completion of the water body.

Design feature GW-1, incorporated in the Reclamation Plan Amendment, shall be complied with as set forth therein.

### **4.13.6 Level of Significance After Mitigation**

Incorporation of requirements in the proposed Reclamation Plan Amendment, as well as implementation of mitigation measures HAZ-1 through HAZ-5, would reduce impacts due to hazards and hazardous materials to below a level of significance.

## 4.14 HOUSING AND POPULATION

### 4.14.1 Existing Environmental Setting

According to most recent San Diego Association of Governments (SANDAG) population estimate, the total population of the City of Chula Vista, as of January 1, 2009, was 233,108. According to the most recent U.S. Census data available, as assimilated by SANDAG, 173,556 people occupied the City of Chula Vista as of April 1, 2000. The population of the City grew by approximately 34 percent in that nine-year period. In comparison, the City grew by 28 percent in the ten year time period between 1990 and 2000. SANDAG has projected that the City of Chula Vista's population will increase to a total of approximately 267,427 by 2020, approximately 289,044 by 2030, and approximately 317,583 by 2040. This is a population increase of approximately 83 percent between 2000 and 2040.

The most recent SANDAG housing unit estimate identifies the number of housing units in the City of Chula Vista, as of January 1, 2009, as 77,787 units. According to the most recent U.S. Census data available, as assimilated by SANDAG, 59,495 housing units existed in the City of Chula Vista as of April 1, 2000. The number of housing units in the City grew by approximately 31 percent in those nine years. In comparison, between 1990 and 2000, the housing stock increased by approximately 19 percent. The vacancy rate was 3.0 percent as of April 1, 2000 and 5.3 percent as of January 1, 2008. SANDAG has projected that the number of housing units in Chula Vista will increase to a total of 88,185 units by 2020, 94,858 units by 2030, and 103,208 units by 2040. This is an increase of approximately 73 percent between 2000 and 2030.

### Regulatory Setting

All residential development must comply with the applicable statutes, as outlined in Title 19 of the Chula Vista Municipal Code. Also, the Housing Element of the Chula Vista General Plan Update (2005) requires that residential development with 50 or more dwelling units adhere to the guidelines of the Affordable Housing Program (AHP). The AHP requires projects of 50 housing units or more to allot ten percent of the units for low- and moderate-income household (five percent for low-income and five percent for moderate-income). The City requires each developer to formulate, review with staff, and adopt a specific program and agreement which delineates how and when the affordable units will be provided, including timing of compliance, intended subsidies, income/rent restrictions, and methods to verify compliance. Such affordable housing may be made on-site or through alternative methods, including off-site projects and in-lieu financial contributions. In order to guarantee the provision of affordable housing opportunities, the City requires that a specific AHP that is consistent with the Housing Element of the Chula Vista General Plan be prepared. The AHP is implemented through an Affordable Housing Agreement between the City and the applicant.

### 4.14.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, impacts to housing and population would be significant if the proposed project results in the following:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or

- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere

### **4.14.3 Impact Analysis**

The proposed project consists of the reclamation of the Otay Valley Quarry and does not propose any physical or regulatory changes that would remove a restriction to or encourage population growth in an area. Reclamation actions developed in accordance with the proposed Reclamation Plan Amendment primarily address surface stabilization, revegetation, and aesthetic enhancements such that the site could be used for future uses as allowed under the City General Plan and Zoning Ordinance. The proposed project does not propose new homes or businesses and would not extend roads or other infrastructure to accommodate local or regional growth. The project would periodically add jobs to the area associated with reclamation activities; however, the addition of jobs would be temporary, and no permanent jobs or residential units would occur as a result of project implementation. Impacts would therefore be less than significant.

Implementation of the proposed project would not result in the displacement of any housing. All physical changes resulting from the proposed project would occur on property that consists of an aggregate quarry and associated equipment and structures. No impact would result.

The proposed project would not displace people or require the construction of replacement housing. No impact would result.

### **4.14.4 Level of Significance Before Mitigation**

There are no significant impacts to housing and population that would result from the implementation of the Otay Valley Quarry Reclamation Plan Amendment.

### **4.14.5 Mitigation Measures**

No mitigation measures would be required.

### **4.14.6 Level of Significance After Mitigation**

The project would not result in significant impacts associated with housing and population, and no mitigation is required.

## 4.15 MINERAL RESOURCES

For this analysis, “mineral resources” refers to aggregate resources. Aggregate resources consist of sand, gravel, and crushed rock. These resources provide bulk and strength in construction materials such as Portland cement concrete and asphaltic concrete; can be used as riprap; and may be used as a base under road pavements and cold-mixed asphaltic pavement.

Following California’s mineral classification procedures, the Division of Mines and Geology (DMG) (now the California Geologic Survey) produced *Special Report 153 – Mineral Land Classification: Aggregate Materials in the Western San Diego County Production-Consumption Region*, issued in 1982. An update of that classification study was prepared in 1996. State land classification is presented in the form of MRZs. Directions for identification of MRZs are set forth in the DMG’s *Special Publication 51*.

### 4.15.1 Existing Environmental Setting

The Rock Mountain deposit, upon which Otay Valley Quarry is located, is identified as a MRZ-2 deposit, containing Portland cement concrete (PCC)-grade aggregate. The state-designated resource is shown as “Sector S,” Mineral Land Classification of Rock Mountain, encompassing a geologic unit of metavolcanic rock deposits. (See Figure 4.15-1, *Mineral Land Classification of Rock Mountain*.) According to *SMARA Designation Report No. 4: Designation of Regionally Significant Construction Aggregate Resource Areas in the Western San Diego County Production-Consumption Region*, prepared by the CDC under the direction of the State Mining and Geology Board (SMGB), Sector S is considered to be regionally significant.

### 4.15.2 Threshold of Significance

According to Appendix G of the CEQA Guidelines, a project could have a significant adverse impact on mineral resources if its implementation results in either of the following:

- The loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or
- The loss of availability of locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

### 4.15.3 Impact Analysis

The Otay Valley Quarry mineral deposit is known to have a vertical extent that exceeds the depth of the design in the proposed Reclamation Plan Amendment. The current mine plan provides for resource extraction to a maximum depth of about -300 feet AMSL, which is the depth that material can be extracted based primarily on quarry geometrics and haul road requirements. Access to deeper reserves would require “lay back” of quarry walls, which is not currently planned due to limits of parcel size and surface area required.



## 4.15 MINERAL RESOURCES

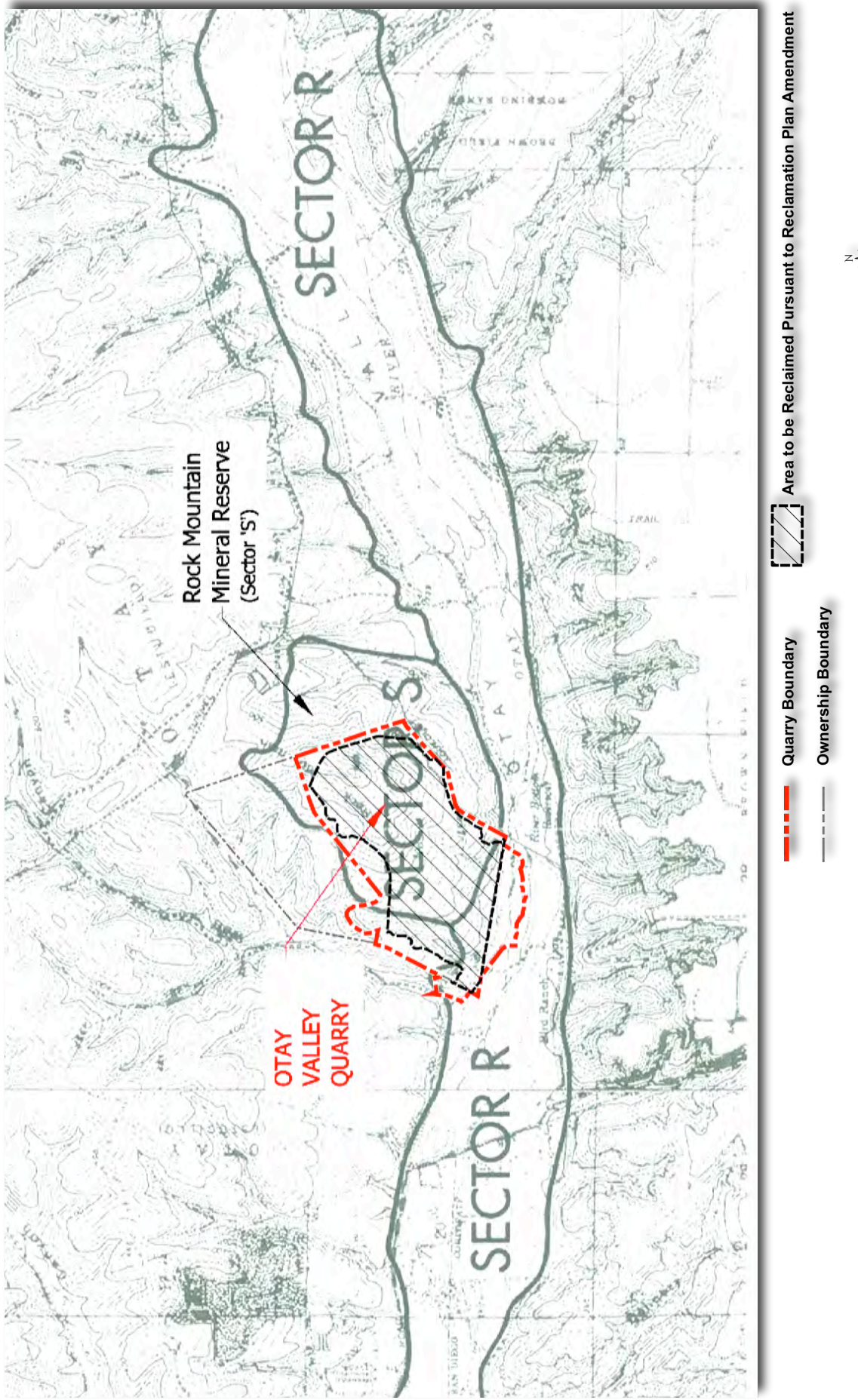


Figure 4.15-1. Mineral Land Classification of Rock Mountain



Mining of resources until depletion would occur prior to implementing the proposed Reclamation Plan Amendment. There would be no loss of availability of a known mineral resource or loss of a locally-important mineral resource, as resources would be already utilized in the on-going mining process at the quarry. Therefore, the project would not have a potential to result in significant impacts to mineral resources.

### **4.15.4 Level of Significance Before Mitigation**

The level of significance prior to mitigation would be classified as no impact. Implementation of the Reclamation Plan Amendment would not occur until the site's resource value is fully utilized and all resources of significance have been extracted.

### **4.15.5 Mitigation Measures**

No mitigation measures would be required.

### **4.15.6 Level of Significance After Mitigation**

The project would not result in significant impacts associated with mineral resources, and no mitigation is required.



## 4.16 GREENHOUSE GAS EMISSIONS

An evaluation of the project's greenhouse gas emissions is included Section 8.0 – Global Climate Change of the *Air Quality Technical Report*, prepared by Dudek Inc., dated March 2010. The *Air Quality Technical Report* is included in its entirety as Appendix F to this EIR.

Neither the SDAPCD nor the City of Chula Vista has recommended emission-based thresholds for construction-related GHG emissions. In the absence of such thresholds and in accordance with the amendments to the CEQA Guidelines, the project's impact with respect to its construction-related GHG emissions and impact on global climate change are evaluated qualitatively. Furthermore, because the project would not result in any operational emissions, the target of 20 percent below business as usual that has been established for the purposes of estimating operational GHG emissions reductions is not applicable, nor is Section 15.26.030 of the City's Municipal Code as it relates to energy efficiency requirements.

### 4.16.1 Existing Environmental Setting

The Project Site is the location of on-going mining and resources extraction and processing operations. Greenhouse gas emissions are present from the heavy machinery and equipment utilized on-site. Additionally, heavy trucks make regular trips to and from the Project Site to transport materials, further contributing to the carbon footprint of the current quarry operation.

#### **The Greenhouse Effect and Greenhouse Gases**

Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs). The greenhouse effect traps heat in the troposphere through a three-fold process as follows: short-wave radiation emitted by the sun is absorbed by the earth; the earth emits a portion of this energy in the form of long-wave radiation; and GHGs in the upper atmosphere absorb this long-wave radiation and emit the long-wave radiation into space and toward the earth. The "trapping" of the long-wave (thermal) radiation emitted back toward the earth is the underlying process of the greenhouse effect.

Principal GHGs include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), ozone (O<sub>3</sub>), and water vapor (H<sub>2</sub>O). Some GHGs, such as CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O, occur naturally and are emitted to the atmosphere through natural processes and human activities. Of these gases, CO<sub>2</sub> and CH<sub>4</sub> are emitted in the greatest quantities from human activities. Emissions of CO<sub>2</sub> are largely by-products of fossil fuel combustion, whereas CH<sub>4</sub> results mostly from off-gassing associated with agricultural practices and landfills. Human-made GHGs, which have a much greater heat-absorption potential than CO<sub>2</sub>, include fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFC), sulfur hexafluoride (SF<sub>6</sub>), and nitrogen trifluoride (NF<sub>3</sub>), which are associated with certain industrial products and processes (CalEPA 2006).

The greenhouse effect is a natural process that contributes to regulating the earth's temperature. Without it, the temperature of the earth would be about 0°F (18°C) instead of its present 57°F (14°C). Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect (National Climatic Data Center 2009).

The effect each GHG has on climate change is measured as a combination of the volume or mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential (GWP). The GWP varies between GHGs; for example, the GWP of methane is 21, and the GWP

of nitrous oxide is 310. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of CO<sub>2</sub>. Thus, GHG gas emissions are typically measured in terms of pounds or tons of “CO<sub>2</sub> equivalent” (CO<sub>2</sub>E).

According to CARB, some of the potential impacts in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high O<sub>3</sub> days, more large forest fires, and more drought years (CARB 2006). Several recent studies have attempted to explore the possible negative consequences that climate change, left unchecked, could have in California. These reports acknowledge that climate scientists’ understanding of the complex global climate system, and the interplay of the various internal and external factors that affect climate change, remains too limited to yield scientifically-valid conclusions on such a localized scale. Substantial work has been done at the international and national level to evaluate climatic impacts, but far less information is available on regional and local impacts.

The primary effect of global climate change has been a rise in average global tropospheric temperature of 0.2°C per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling using 2000 emission rates shows that further warming would occur, which would induce further changes in the global climate system during the current century. Changes to the global climate system and ecosystems and to California would include, but would not be limited to:

- The loss of sea ice and mountain snow pack resulting in higher sea levels and higher sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere’s ability to hold more water vapor at higher temperatures (Intergovernmental Panel on Climate Change (IPCC) 2007)
- Rise in global average sea level primarily due to thermal expansion and melting of glaciers and ice caps, the Greenland and Antarctic ice sheets (IPCC 2007)
- Changes in weather that includes, widespread changes in precipitation, ocean salinity, and wind patterns, and more energetic and aspects of extreme weather including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones (IPCC 2007)
- Decline of Sierra snowpack, which accounts for approximately half of the surface water storage in California, by 70 percent to as much as 90 percent over the next 100 years (CalEPA 2006)
- Increase in the number of days conducive to O<sub>3</sub> formation by 25 percent to 85 percent (depending on the future temperature scenario) in high O<sub>3</sub> areas of Los Angeles and the San Joaquin Valley by the end of the 21st century (CalEPA 2006)
- High potential for erosion of California’s coastlines and sea water intrusion into the Sacramento Delta and levee systems due to the rise in sea level (CalEPA 2006).

### **Regulatory Setting**

#### **Kyoto Protocol**

The United States has been a participant in the United Nations Framework Convention on Climate Change (UNFCCC) since it was signed on March 21, 1994. The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. The original Kyoto Protocol was negotiated in December 1997 and came into force on February 16, 2005. As of November 2009, 189 countries and the European Economic Community (EEC) have ratified the agreement (although the United States has not) (UNFCCC 2009). The goal of the protocol is to achieve overall emissions

reduction targets for six GHGs by the period 2008 to 2012.

### **Federal Activities**

***Massachusetts vs. EPA.*** Previously, the EPA had regulated GHGs under the CAA based on the assertion that “(1) the [Clean Air] Act does not authorize [the EPA] to issue mandatory regulations to address global climate change, and (2) even if [the EPA] had the authority to set GHG emission standards, it would have been unwise to do so at that time because a causal link between GHGs and the increase in global surface air temperatures was not unequivocally established.” In *Massachusetts v. EPA*, however, the United States Supreme Court held that the EPA has the statutory authority under Section 202 of the CAA to regulate GHGs from new motor vehicles because GHGs meet the CAA definition of an air pollutant. The court did not hold that the EPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHGs from motor vehicles cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare. Upon the final decision, President Bush signed Executive Order 13432 on May 14, 2007, directing the EPA, along with the Departments of Transportation, Energy, and Agriculture, to initiate a regulatory process that responds to the Supreme Court’s decision.

In *Massachusetts v. EPA*, the Supreme Court directed the EPA Administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the Administrator is required to follow the language of Section 202(a) of the CAA. On December 7, 2009, the Administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the CAA:

- The Administrator found that elevated concentrations of GHGs—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the endangerment finding.
- The Administrator further found the combined emissions of GHGs—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the cause or contribute finding.

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the CAA.

***Energy Independence and Security Act.*** On December 19, 2007, President Bush signed the Energy Independence and Security Act of 2007. Among other key measures, the Act would do the following, which would aid in the reduction of national GHG emissions:

1. Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
2. Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by Model Year 2020, directs National Highway Traffic Safety Administration to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

3. Prescribe or revise standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

### **State of California**

***AB 1493.*** In a response to the transportation sector accounting for more than half of California's CO<sub>2</sub> emissions, Assembly Bill (AB) 1493 (Pavley) was enacted on July 22, 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal transportation in the state. The bill required that CARB set the GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009 to 2012) standards will result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013 to 2016) standards will result in a reduction of about 30 percent.

In December 2004, these regulations were challenged in Federal court by the Alliance of Automobile Manufacturers, which claimed that the law regulated vehicle fuel economy, a duty assigned to the federal government. Upon the U.S. Supreme Court's decision in *Massachusetts v. EPA*, the U.S. District Court for the Eastern District dismissed the case by the Alliance of Automobile Manufacturers in December 2007. However, before these regulations may go into effect, the EPA must grant California a waiver under the federal CAA, which ordinarily preempts state regulation of motor vehicle emission standards. On December 19, 2007, Stephen Johnson, the EPA Administrator, denied the waiver citing the need for a national approach to reducing GHG emissions, the lack of a "need to meet compelling and extraordinary conditions," and the benefits to be achieved through the Energy Independence and Security Act of 2007 (Johnson 2007). The California Attorney General subsequently filed suit in January 2008 to overturn the administrator's decision. The Obama Administration reevaluated the waiver, and the waiver was granted by Lisa Jackson, the EPA Administrator, on June 30, 2009.

***Senate Bill 1078.*** Approved by Governor Davis in September 2002, Senate Bill 1078 (SB 1078, Sher) established the Renewal Portfolio Standard program, which requires an annual increase in renewable generation by the utilities equivalent to at least one percent of sales, with an aggregate goal of 20 percent by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20 percent of their power from renewable sources by 2010. (See SB 107 and Executive Orders S-14-08 and S-21-09, below.)

***Executive Order S-3-05.*** In June 2005, Governor Schwarzenegger established California's GHG emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals: GHG emissions should be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80 percent below 1990 levels by 2050. The Secretary of CalEPA is required to coordinate efforts of various agencies to collectively and efficiently reduce GHGs. Representatives from several State agencies comprise the Climate Action Team. The Climate Action Team is responsible for implementing global warming emissions reduction programs. The Climate Action Team fulfilled its report requirements through the March 2006 Climate Action Team Report to Governor Schwarzenegger and the legislature (California Climate Action Team 2006). A second draft biennial report was released in April 2009.

The 2009 Draft Climate Action Team Report expands on the policy originated in the 2006 assessment. The

2009 report provides new information and scientific findings regarding the development of new climate and sea-level projections using new information and tools that have recently become available and evaluates climate change within the context of broader soil changes, such as land use changes and demographics. The 2009 report also identifies the need for additional research in several different aspects that affect climate change in order to support effective climate change strategies. The aspects of climate change that were discussed that need future research include vehicle and fuel technologies, land use and smart growth, electricity and natural gas, energy efficiency, renewable energy and reduced carbon energy sources, low GHG technologies for other sectors, carbon sequestration, terrestrial sequestration, geologic sequestration, economic impacts and considerations, social science, and environmental justice.

**SB 107.** Approved by Governor Schwarzenegger on September 26, 2006, SB 107 (Simitian) requires investor-owned utilities such as Pacific Gas and Electric, Southern California Edison, and San Diego Gas and Electric, to generate 20 percent of their electricity from renewable sources by 2010. Previously, State law required that this target be achieved by 2017. (See SB 1078).

**AB 32.** In furtherance of the goals established in Executive Order S-3-05, the legislature enacted AB 32 (Nuñez and Pavley), the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed on September 27, 2006. The GHG emissions limit is equivalent to the 1990 levels, which are to be achieved by 2020.

CARB has been assigned to carry out and develop the programs and requirements necessary to achieve the goals of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions. This program will be used to monitor and enforce compliance with the established standards. CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 allows CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

The first action under AB 32 resulted in the adoption of a report listing early action GHG emission reduction measures on June 21, 2007. The early actions include three specific GHG control rules. On October 25, 2007, CARB approved an additional six early action GHG reduction measures under AB 32. The original three adopted early action regulations meeting the narrow legal definition of “discrete early action GHG reduction measures” consist of:

1. A low-carbon fuel standard to reduce the “carbon intensity” of California fuels.
2. Reduction of refrigerant losses from motor vehicle air conditioning system maintenance to restrict the sale of “do-it-yourself” automotive refrigerants.
3. Increased methane capture from landfills to require broader use of state-of-the-art methane capture technologies.

The additional six early action regulations, which were also considered “discrete early action GHG reduction measures,” consist of:

1. Reduction of aerodynamic drag, and thereby fuel consumption, from existing trucks and trailers through retrofit technology.



2. Reduction of auxiliary engine emissions of docked ships by requiring port electrification.
3. Reduction of perfluorocarbons from the semiconductor industry.
4. Reduction of propellants in consumer products (e.g., aerosols, tire inflators, and dust removal products).
5. Require that all tune-up, smog check and oil change mechanics ensure proper tire inflation as part of overall service in order to maintain fuel efficiency.
6. Restriction on the use of SF<sub>6</sub> from non-electricity sectors if viable alternatives are available.

As required under AB 32, on December 6, 2007, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was set at 427 million metric tons CO<sub>2</sub>E. In addition to the 1990 emissions inventory, CARB also adopted regulations requiring mandatory reporting of GHGs for large facilities that account for 94 percent of GHG emissions from industrial and commercial stationary sources in California. About 800 separate sources that fall under the new reporting rules and include electricity generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and other industrial sources that emit carbon dioxide in excess of specified thresholds.

On December 11, 2008, CARB approved the *Climate Change Proposed Scoping Plan: A Framework for Change* (Scoping Plan; CARB 2008) to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. Additional development of these measures and adoption of the appropriate regulations will occur over the next two years, becoming effective by January 1, 2012.

The key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards.
- Achieving a statewide renewables energy mix of 33 percent.
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions.
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets.
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard.
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State of California's long term commitment to AB 32 implementation.

**SB 1368.** In September 2006, Governor Schwarzenegger signed SB 1368, which requires the California Energy Commission (CEC) to develop and adopt regulations for GHG emissions performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission (CPUC). This effort

will help to protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants whose GHG emissions are as low or lower than new combined-cycle natural gas plants, by requiring imported electricity to meet GHG performance standards in California, and by requiring that the standards be developed and adopted in a public process.

**Executive Order S-1-07.** Issued on January 18, 2007, Executive Order S-1-07 sets a declining Low Carbon Fuel Standard (LCFS) for GHG emissions measured in CO<sub>2</sub>-equivalent gram per unit of fuel energy sold in California. The target of the LCFS is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources such as algae, wood, and agricultural waste. In addition, the LCFS would drive the availability of plug-in hybrid, battery electric, and fuel-cell power motor vehicles. The LCFS is anticipated to replace 20 percent of the fuel used in motor vehicles with alternative fuels by 2020.

**SB 97.** In August 2007, the legislature enacted SB 97 (Dutton), which directs OPR to develop guidelines under CEQA for the mitigation of GHG emissions. OPR is to develop proposed guidelines by July 1, 2009, and the Natural Resources Agency is directed to adopt guidelines by January 1, 2010. On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the State CEQA Guidelines. This bill also protects projects funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, or the Disaster Preparedness and Flood Protection Bond Act of 2006 from claims of inadequate analysis of GHG as a legitimate cause of action. This latter provision will be repealed on January 1, 2010.

On June 19, 2008, OPR issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents (OPR 2008). The advisory indicated that a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities, should be identified and estimated. The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures that are necessary to reduce GHG emissions to a less-than-significant level.

On April 13, 2009, OPR submitted to the Natural Resources Agency its proposed amendments to the state CEQA Guidelines relating to GHG emissions. On July 3, 2009, the Natural Resources Agency commenced the Administrative Procedure Act rulemaking process for certifying and adopting the proposed amendments, starting the public comment period.

The Natural Resources Agency adopted CEQA Guidelines Amendments on December 30, 2009, and transmitted them to the Office of Administrative Law on December 31, 2009. On February 16, 2010, the Office of Administrative law completed its review and filed the amendments with the secretary of state. The amendments became effective on March 18, 2010. The amended guidelines establish several new CEQA requirements concerning the analysis of GHGs, including the following:

- Requiring a lead agency to “make a good faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project” [Section 15064(a)].

- Providing a lead agency with the discretion to determine whether to use quantitative or qualitative analysis or performance standards to determine the significance of greenhouse gas emissions resulting from a particular project [Section 15064.4(a)].
- Requiring a lead agency to consider the following factors when assessing the significant impacts from greenhouse gas emissions on the environment.
- The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions [Section 15064.4(b)].
- Allowing lead agencies to consider feasible means of mitigating the significant effects of greenhouse gas emissions, including reductions in emissions through the implementation of project features or off-site measures, including offsets that are not otherwise required [Section 15126.4(c)].

The amended guidelines also establish two new guidance questions regarding GHG emissions in the Environmental Checklist set forth in CEQA Guidelines Appendix G:

- Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The adopted amendments do not establish a GHG emission threshold, and instead allow a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The Natural Resources Agency also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions.

**SB 375.** In August 2008, the legislature passed and on September 30, 2008, Governor Schwarzenegger signed SB 375 (Steinberg), which addresses GHG emissions associated with transportation sector through regional transportation and sustainability plans. By September 30, 2010, CARB will assign regional GHG reduction targets for the automobile and light truck sector for 2020 and 2035. The targets are required to consider the emission reductions associated with vehicle emission standards (see SB 1493), the composition of fuels (see Executive Order S-1-07), and other CARB-approved measures to reduce GHG emissions. Regional metropolitan planning organizations will be responsible for preparing a Sustainable Communities Strategy within the Regional Transportation Plan. The goal of the Sustainable Communities Strategy is to establish a development plan for the region, which, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If a Sustainable Communities Strategy is unable to achieve the GHG reduction target, a metropolitan planning organization must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. SB 375 provides incentives for streamlining CEQA requirements by substantially reducing the requirements for “transit

priority projects,” as specified in SB 375, and eliminating the analysis of the impacts of certain residential projects on global warming and the growth-inducing impacts of those projects when the projects are consistent with the Sustainable Communities Strategy or Alternative Planning Strategy.

***Executive Order S-13-08.*** Governor Schwarzenegger issued Executive Order S-13-08 on November 14, 2008. The Executive Order is intended to hasten California’s response to the impacts of global climate change, particularly sea level rise. It directs State agencies to take specified actions to assess and plan for such impacts. It directs the Resource Agency, in cooperation with the California Department of Water Resources, CEC, California’s coastal management agencies, and the Ocean Protection Council to request the National Academy of Sciences to prepare a Sea Level Rise Assessment Report by December 1, 2010. The Ocean Protection Council, California Department of Water Resources, and CEC, in cooperation with other state agencies are required to conduct a public workshop to gather information relevant to the Sea Level Rise Assessment Report. The Business, Transportation, and Housing Agency was ordered to assess the vulnerability of the State’s transportation systems to sea level rise within 90 days of the order. The OPR and the Resources Agency are required to provide land use planning guidance related to sea level rise and other climate change impacts. The order also requires the other State agencies to develop adaptation strategies by June 9, 2009, to respond to the impacts of global climate change that are predicted to occur over the next 50 to 100 years. A discussion draft adaptation strategies report was released in August 2009, and the final adaption strategies report was issued in December 2009. To assess the State’s vulnerability, the report summaries key climate change impacts to the State for the following areas: public health, ocean and coastal resources, water supply and flood protection, agriculture, forestry, biodiversity and habitat, and transportation and energy infrastructure. The report then recommends strategies and specific responsibilities related to water supply, planning and land use, public health, fire protection, and energy conservation.

***Executive Order S-14-08.*** On November 17, 2008, Governor Schwarzenegger issued Executive Order S-14-08. This Executive Order focuses on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. The governor’s order requires that all retail suppliers of electricity in California serve 33 percent of their load with renewable energy by 2020. Furthermore, the order directs State agencies to take appropriate actions to facilitate reaching this target. The Resources Agency, through collaboration with the CEC and Department of Fish and Game, is directed to lead this effort. Pursuant to a Memorandum of Understanding between the CEC and Department of Fish and Game creating the Renewable Energy Action Team, these agencies will create a “one-stop” process for permitting renewable energy power plants.

***Executive Order S-21-09.*** On September 15, 2009, Governor Schwarzenegger issued Executive Order S-21-09. This Executive Order directed CARB to adopt a regulation consistent with the goal of Executive Order S-14-08 by July 31, 2010. CARB is further directed to work with the CPUC and CEC to ensure that the regulation builds upon the Renewable Portfolio Standard program and is applicable to investor-owned utilities, publicly owned utilities, direct access providers, and community choice providers. Under this order, CARB is to give the highest priority to those renewable resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health and that can be developed most quickly in support of reliable, efficient, cost-effective electricity system operations.

### **City of Chula Vista**

The City of Chula Vista has developed a number of strategies and plans aimed at improving air quality. The City is a part of the Cities for Climate Protection Program, which is headed by the International Council of

Local Environmental Initiatives (ICLEI). In November 2002, Chula Vista adopted the CO<sub>2</sub> Reduction Plan in order to lower the community's major GHG emissions, strengthen the local economy, and improve the global environment. The CO<sub>2</sub> Reduction Plan focuses on reducing fossil fuel consumption and decreasing reliance on power generated by fossil fuels, which would have a corollary effect in the reduction of air pollutant emissions into the atmosphere. The following 20 action measures have been proposed within the plan in order to achieve this goal:

1. Municipal clean fuel vehicle purchases
2. Green power
3. Municipal clean fuel demonstration project
4. Telecommuting and telecenters
5. Municipal building upgrades and trip reduction
6. Enhanced pedestrian connections to transit
7. Increased housing density near transit
8. Site design with transit orientation
9. Increased land use mix
10. Green Power public education program
11. Site design with pedestrian/bicycle orientation
12. Bicycle integration with transit and employment
13. Bicycle lanes, paths, and routes
14. Energy efficient landscaping
15. Solar pool heating
16. Traffic signal and system upgrades
17. Student transit subsidy
18. Energy efficient building program
19. Municipal Life-Cycle purchasing standards
20. Increased employment density near transit.

More recently, the Chula Vista City Council adopted the new 2008 Energy Code with an amendment requiring an increased energy efficient standard. This amendment went into effect on February 26, 2010 as Section 15.26.030 of the Municipal Code. As required by this amendment, all building permits applied for and submitted on or after this date are subject to these increased energy efficiency standards. The increase in energy efficiency is a percentage above the new 2008 Energy Code (Title 24) and is dependent on climate zone and type of development proposed. The designation is as follows:

- New residential and nonresidential projects that fall within climate zone 7 must be at least 15 percent more energy efficient than the 2008 Energy Code. Climate zone 7 encompasses the western portion of the City Of Chula Vista (City of Chula Vista 2010).
- New low-rise residential projects (three-stories or less) that fall within climate zone 10 must be at least 20 percent more energy efficient than the 2008 Energy Code. New non- residential, high-rise residential or hotel/motel projects that fall within climate zone 10 must be at least 15 percent more energy efficient than the 2008 Energy Code. Climate zone 10 encompasses the easternmost portion of the City Of Chula Vista (City of Chula Vista 2010).

### **GHG Emissions and CEQA**

GHG emissions contributing to global climate change have only recently been addressed in CEQA

documents, such that CEQA and case law do not provide much guidance relative to their assessment. CEQA does, however, provide guidance regarding topics such as climate change in Guidelines Section 15144, Forecasting. Section 15144 notes that preparation of an environmental impact analysis document necessarily involves some degree of forecasting. While forecasting the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.

### **Guidelines for the Determination of Significance**

The State of California has developed guidelines to address the significance of climate change impacts based on Appendix G of the CEQA Guidelines, which provides guidance that a project would have a significant environmental impact if it would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Neither the State of California nor the SDAPCD has adopted emission-based thresholds for GHG emissions under CEQA. OPR's Technical Advisory titled *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review* states that "public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact (OPR 2008, p. 4). Furthermore, the advisory document indicates "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice."

At this time, the state has established the following goals for reduction of GHG emissions:

- 2000 levels by 2010 (11 percent below business as usual)
- 1990 levels by 2020 (25 percent below business as usual)

### **4.16.2 Thresholds of Significance**

Appendix G of the CEQA guidelines defines a potentially significant impact associated with greenhouse gas emissions as one that would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Additionally, for CEQA purposes, the City of Chula Vista utilizes a general target of 20 percent below business as usual for the purposes of estimating operational GHG emissions reductions. This reduction is considered to be an appropriate midpoint between the 2010 and 2020 targets set forth in AB 32. Consistent with Section 15.26.030 of the City's Municipal Code, new nonresidential projects that fall within climate

zone 7 must be at least 15 percent more energy efficient than the 2005 Energy Code. Therefore, a 15 percent reduction from business as usual would ensure consistency with the City's Municipal Code, where "business as usual" is considered to be development according to the energy efficiency standards established in the 2005 Title 24 standards. Importantly, this standard is only applicable to operational emissions.

### 4.16.3 Impact Analysis

Reclamation of the quarry site would result in less emission of greenhouse gases than the current mining operation. Upon final reclamation, all mining and processing equipment will be removed from the site. Additionally, with the exception of light vehicle trips associated with intermittent maintenance of revegetated and reclaimed areas of the site, vehicular trips to and from the Project Site would be negligible, thereby reducing GHG emissions to minimal levels.

### Construction Emissions

GHG emissions would be associated with the construction phase of the proposed project through use of construction equipment and vehicle trips. Emissions of CO<sub>2</sub> were estimated using the URBEMIS 2007, Version 9.2.4, land use and air emissions model (Rimpo and Associates 2007). As was done for criteria pollutant emissions, URBEMIS 2007 was run for calendar years 2039 and 2040. The model results were adjusted to estimate CH<sub>4</sub> and N<sub>2</sub>O emissions in addition to CO<sub>2</sub>. The CO<sub>2</sub> emissions from off-road equipment and vehicles and delivery trucks, which are assumed by URBEMIS 2007 to be diesel fueled, were adjusted by a factor derived from the relative CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O for diesel fuel as reported in the California Climate Action Registry's (CCAR) *General Reporting Protocol* (CCAR 2009) for transportation fuels and the global warming potential for each GHG to estimate the emissions in units of CO<sub>2</sub>E. The CO<sub>2</sub> emissions associated with construction worker trips were multiplied by a factor based on the assumption that CO<sub>2</sub> represents 95 percent of the CO<sub>2</sub>E emissions associated with passenger vehicles (EPA 2005). The results were then converted from annual tons per year to metric tons per year. Table 4.16-1, *Estimated Construction GHG Emissions*, shows the estimated annual GHG construction emissions associated with the proposed project. [Although reclamation activities would not occur until mining operation are complete (estimated to occur in 2089), for the purposes of modeling, it was assumed that the proposed project would commence in December 2039 (URBEMIS 2007 does not estimate emissions beyond 2040).] Construction emissions impacts would be less than significant.

**Table 4.16-1. Estimated Construction GHG Emissions (metric tons/year)**

Construction Year	CO <sub>2</sub> E Emissions
2039	28
2040	55

Source: URBEMIS 2007 Version 9.2.4.

### Operational Emissions

Greenhouse gases are emitted under existing conditions by operational uses on the mining site (truck and vehicle trips to and from the Project Site, as well as heavy vehicle utilized for resource extraction). These operational emissions will continue until approximately 2089, when resource extraction is anticipated to be complete. The proposed project would not result in any long-term (operational) GHG emissions, as there would be no new mobile sources or stationary sources associated with the proposed project following the completion of reclamation activities.



### **4.16.4 Level of Significance Before Mitigation**

GHG emissions would only occur during construction of the project, which is anticipated to take approximately 11 weeks to complete. Following construction, the proposed project would not result in GHG emissions, as there would be no new mobile sources or stationary sources. As a result, the proposed project is not likely to result in a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Impacts would be less than significant.

### **4.16.5 Mitigation Measures**

Impacts would not be significant. No mitigation is required.

### **4.16.6 Level of Significance After Mitigation**

Project impacts would not be significant, and no mitigation would be required.



## 5.0 CUMULATIVE EFFECTS

Section 15355 of the State CEQA Guidelines describes “cumulative impacts” as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. These individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from a project is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time.

According to Section 15130 of the CEQA Guidelines, the discussion of cumulative effects “need not be provided as great a detail as is provided the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness.” The evaluation of cumulative impacts is required by Section 15130 to be based on either: “(A) a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) a summary of projections contained in an adopted general plan or related planning document, on in a prior environmental document which had been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative effect. Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency.” Because the Otay Valley Quarry Reclamation Plan Amendment project would occur at such a distant future, with implementation beginning in 2089, it is not possible to accurately predict the past, present, and probable future projects that would produce related or cumulative impacts, including, if necessary, those project outside the control of the agency. Therefore, this cumulative effects analysis relies on build-out of the City of Chula Vista General Plan and implementation of the City’s MSCP Preserve.

### 5.1 PLANS CONSIDERED FOR CUMULATIVE EFFECTS ANALYSIS

#### 5.1.1 CITY OF CHULA VISTA GENERAL PLAN

The Chula Vista General Plan is a guiding document for the development of the City of Chula Vista. The General Plan was comprehensively updated in 2005. The General Plan addresses an area of approximately 91 square miles, and consists of the incorporated area of the City of Chula Vista, the existing sphere of influence, and additional unincorporated areas. The General Plan includes a General Plan Land Use Map, identifying land uses for the City of Chula Vista, and a series of elements that address specific aspects of the area’s development. The Project Site is within the East Planning Area and is designated for Open Space, Residential, Commercial, and Light Industrial land uses. Included within the City’s General Plan, the Chula Vista East Planning Area Plan addresses the issues and plans of the project area in greater detail.

The proposed Otay Valley Quarry Reclamation Plan Amendment project is situated within the Central District of the Otay Ranch Subarea, within the East Plan Area component of the City of Chula Vista General Plan. The area plan (and its subsequent components) provides more specific planning proposals based on the historical, economic, and community nature of the project area. The East Planning Area identifies six subareas (including the Otay Ranch Subarea), with the Otay Ranch Subarea further broken out into four planning districts. The Central District, where the project is located, is comprised of Villages Four, Seven, and Eight of the Otay Ranch GDP. The Project Site is located within Village Four.

The vision for the Central District is to have a mixture of land uses and intensities that includes a large community park, a pedestrian-oriented mixed use town center, single-family and multi-family residential uses surrounding a typical village core, and a middle school. The large community park will provide enhanced sports and recreation opportunities for all Otay Ranch residents. Single-family homes along Rock Mountain Road will have expansive views of Wolf Canyon, Rock Mountain, and the Otay Valley. Development in the Rock Mountain area is sensitively situated to preserve significant viewsheds and topographic features. A pedestrian-oriented town center, with transit services town center arterials in the form of couplets or other pedestrian-oriented arterial street design, will be located along portions of La Media Road and Rock Mountain Road, where Villages Four, Seven, and Eight meet.

### 5.1.2 MULTIPLE SPECIES CONSERVATION PROGRAM

The MSCP is a comprehensive, long-term habitat conservation plan developed to address the needs of multiple species and the preservation of natural vegetation communities in southwestern San Diego County. The MSCP Subregional Plan, a "framework" plan for the 12 participating jurisdictions, was adopted by the City of San Diego and County of San Diego in 1997. The MSCP Subregional Plan addresses the potential impacts of urban growth, natural habitat loss, and species endangerment; and creates a plan to mitigate for the potential loss of "covered species" and their habitat due to the direct, indirect, and cumulative impacts of future development of both public and private lands within the MSCP's approximately 900-square mile study area.

The City of Chula Vista MSCP Subarea Plan is a policy document through which the MSCP Subregional Plan is implemented within the City's jurisdiction. The City's MSCP Subarea Plan provides a blueprint for habitat preservation and forms the basis for Federal and State incidental "take" permits for 86 plant and animal species within the City. The incidental take permits are issued by the United States Fish and Wildlife Service and the California Department of Fish and Game, also referred to as the "Wildlife Agencies".

The City of Chula Vista Final MSCP Subarea Plan was approved by the Chula Vista City Council in May 2003. The Subarea Plan provides conservation of covered species and their associated habitats. Specifically, the Plan includes: 1) a Quino checkerspot butterfly recovery component sufficient to warrant coverage for the species and making it the "86th" covered species under the City's requested incidental take permit; 2) additional conservation on a number of properties increasing the City's overall Preserve acreage; and 3) implementing ordinances and an implementing agreement to provide further assurance that the Subarea Plan will be implemented as described in the Plan. The City's Preserve will eventually encompass approximately 5,000 acres of the City's most sensitive open space areas. In addition, another approximately 4,200 acres outside the City's jurisdiction will be preserved as a result of development occurring within the City's urban boundaries. Lands set aside within the Preserve will be appropriately managed while still providing passive recreational opportunities for area residents and the public at large.

An IA was signed by the Wildlife Agencies in order to ensure implementation of the Chula Vista MSCP Subarea Plan. The IA serves as the legal agreement between the City of Chula Vista and Wildlife Agencies binding each of the parties to perform the obligations, responsibilities, and tasks assigned within the Agreement.

## **5.2 CUMULATIVE EFFECTS ANALYSIS**

The project's potential to make a considerable contribution to cumulative effects associated with the various environmental issue areas addressed in this EIR is evaluated below.

### **5.2.1 LAND USE, PLANNING, AND ZONING**

As discussed in Section 4.1, *Land Use, Planning, and Zoning*, the Project Site is the location of on-going mining operations. The proposed Reclamation Plan Amendment would be implemented following completion of mining, which is anticipated to be in 2089. The proposed Otay Valley Quarry Reclamation Plan Amendment project is consistent with the regulations of the underlying zone, General Plan designation, and MSCP. Upon reclamation, the reclaimed Project Site would not preclude implementation of land uses allowed in the underlying P-C zone and General Plan. However, the project has the potential for indirect impacts on the MSCP Preserve, located adjacent to the Project Site. Mitigation measures would be incorporated to reduce the project's indirect impacts to below a level of significance.

Because the project would not be implemented until 2089, it is difficult to anticipate what cumulative projects with regard to land use, planning, and zoning would occur in the project area that might contribute similar indirect impacts on the MSCP Preserve. Nonetheless, in accordance with the City's MSCP Subarea Plan, projects would be required to adhere to adjacency guidelines, including mitigation measures, which would reduce cumulative indirect impacts to below a level of significance.

### **5.2.2 LANDFORM ALTERATION/AESTHETICS**

*Landform Alteration/Aesthetics* are discussed in Section 4.2. As presented in Section 4.2, land uses within the project boundary consist of existing mining and undeveloped mineral reserve areas. Mining and processing activities have been centered at the terminus of the site access road for the past several decades. As excavation has reached current design grade, extraction operations have gradually moved north, creating an open face that further accesses the Rock Mountain mineral reserve. Proposed reclamation of the Project Site would transform stark steep mined slopes into naturally vegetated slopes of varying gradients with a groundwater-filled lake. The reclaimed site would blend more naturally with the surrounding environment than the current land use. Views from scenic vistas and roadways would not be interrupted by the Project Site and would be potentially enhanced by the natural and vegetated form of the reclaimed quarry. There are no known projects in the project area that propose a similar level of change in landform and aesthetics. Any development projects that could occur on the Project Site or surrounding area would do so in accordance with the underlying zone and General Plan requirements. Therefore, cumulative impacts to landform alteration/aesthetics would not occur.

### **5.2.3 TRAFFIC, CIRCULATION, AND ACCESS**

Under existing conditions, traffic generated on-site is the result of on-going mineral extraction and mining activities. Mining traffic includes large trucks coming and going from the quarry, heavy trucks and earthmovers working within the quarry, and other vehicles necessary for the functioning of the quarry mining operation. As discussed in Section 4.3, *Traffic, Circulation, and Access*, the proposed Otay Valley Quarry Reclamation Plan Amendment would generate minimal traffic and substantially less than occurs under existing conditions. Traffic would occur for a short period of time (approximately 11 weeks) and only during implementation of the Reclamation Plan Amendment. Given the negligible amount of traffic associated with the project and the short duration when traffic would be generated, the project's contribution to cumulative traffic would be negligible.

### 5.2.4 NOISE

Noise on-site is currently generated from on-going mining operations. Sources of noise include heavy trucks and machinery and vehicular traffic within the quarry. Additionally, loud bursts of noise from periodic rock blasts occur as part of mining at the site. As addressed in Section 4.4, *Noise*, the project would not result in significant direct noise impacts. However, the project has the potential to result in indirect noise impacts to the MSCP Preserve, located adjacent to the Project Site. Construction noise would be generated from the project during implementation of the Reclamation Plan Amendment. However, noise would be intermittent, and noise levels would depend on the type of equipment in operation at any specific time. The Reclamation Plan Amendment would be implemented in approximately 11 weeks, after which time, noise from the site would be essentially non-existent. All construction activities would adhere to the City's noise regulations. The project would implement mitigation measures that would reduce to below a level of significance indirect noise impacts on the MSCP Preserve. Any cumulative projects that would create similar indirect noise impacts on the Preserve would be required to implement measures to ensure cumulative indirect noise impacts are not significant. Cumulatively significant noise impacts would not occur.

### 5.2.5 AIR QUALITY

In analyzing cumulative impacts from a proposed project, the analysis must specifically evaluate a project's contribution to cumulative increase in pollutants for which the San Diego Air Basin is listed as "non-attainment" for the State AAQS. A project that has a significant impact on air quality with regard to emissions of PM<sub>10</sub>, NO<sub>x</sub>, and/or reactive organic compounds (ROGs) as determined by the screening criteria outlined Section 5.4, *Air Quality*, would have a significant cumulative effect. In the event direct impacts from a project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions from the project, in combination with the emissions from other proposed, or reasonably foreseeable future projects are in excess of screening levels identified above, and the project's contribution accounts for more than an insignificant proportion of the cumulative total emissions.

With regard to past and present projects, the background ambient air quality, as measured at the monitoring stations maintained and operated by the San Diego Air Pollution Control District, measures the concentrations of pollutants from existing sources. Past and present project impacts are therefore included in the background ambient air quality data.

Under existing conditions the Otay Valley Quarry generates air quality pollutants associated with resource extraction and mining activities, heavy machinery use, and truck hauling. While the operation of heavy equipment for reclamation purposes would generate emissions, the emissions would be substantially less than those currently generated by mining operations and would occur over a relatively short period of time (approximately 11 weeks). Emissions from the project area would be reduced during reclamation activities, and even further reduced after the completion of reclamation activities, as compared to existing emission levels. The project would not result in a cumulatively considerable net increase of any criteria pollutant, and the project's contribution to cumulatively significant air quality impacts would be nominal. Therefore, cumulative air quality impacts would be less than significant.

### 5.2.6 BIOLOGICAL RESOURCES

The City of Chula Vista is a participant in the San Diego MSCP, a comprehensive, long-term habitat conservation program designed to provide permit issuance authority for take of covered species to the local

regulatory agencies. The City of Chula Vista implemented the MSCP to provide for a regional mitigation solution for impacts to multiple, rather than single, species and their habitats. The MSCP is implemented in Chula Vista through the Subarea Plan. Implementation of the MSCP results in cumulatively significant impacts associated with species and habitats covered by the Plan are avoided.

The Project Site is the location of on-going resource extraction and mining activities. The 197-acre area to be reclaimed will have been completely mined prior to reclamation. As such, the quarry is devoid of any naturally occurring biological resources. Additionally, the project site is completely outside the MSCP Preserve boundary. Although portions of the quarry are identified as a “Minor Amendment Area,” the quarry itself is not designated as preserve by the MSCP, but is adjacent to Preserve lands.

As concluded in Section 4.6, *Biological Resources*, the project has the potential to cause indirect impacts to adjacent MSCP Preserve lands. Mitigation measures would be required to reduce the project’s indirect impacts to below a level of significance. Other projects within the City having similar impacts would also be required to adhere to the City’s MSCP guidelines; and, where indirect impacts to the Preserve could occur, similar mitigation requirements would be placed on other projects as part of build-out of the City’s General Plan. Implementation of measures to mitigate indirect impacts on the MSCP Preserve would ensure that cumulatively significant indirect impacts from all cumulative projects within the City’s MSCP would be reduced to below a level of significance and therefore, no significant cumulative impacts would result.

### 5.2.7 CULTURAL RESOURCES

As addressed in Section 4.7, *Cultural Resources*, the Project Site is the location of on-going resource extraction and processing operations. Structures on-site are minimal and consist of those temporary buildings necessary for operations. No structures of historical or cultural significance are located on-site. As a fully extracted quarry, no archeological resources or human remains exist on-site. Although the probability is low, the discovery of human remains during reclamation of the site would be considered a potentially significant impact and mitigation measures would be implemented that would reduce this impact to below a level of significance. Build-out of the General Plan could result in projects that have a similar impact on cultural resources. Therefore, the project has the potential to contribute to the cumulative loss of unknown significant cultural resources. However, other future projects would be required to implement mitigation similar to the proposed project. Implementation of that mitigation would reduce cumulative impacts to below a level of significance.

### 5.2.8 PALEONTOLOGICAL RESOURCES

As addressed in Section 4.8, *Paleontological Resources*, the Project Site is the location of on-going resource extraction and processing operations. Currently, there is no evidence of paleontological resources on the Project Site. Although the probability is low, the discovery of paleontological resources during reclamation of the site would be considered a potentially significant impact. Mitigation measures would be implemented that would reduce this impact to below a level of significance. Build-out of the General Plan could result in projects that have a similar impact on paleontological resources. Therefore, the project has the potential to contribute to the cumulative loss of unknown significant paleontological resources. However, other future projects would be required to implement mitigation similar to the proposed project. Implementation of that mitigation would reduce cumulative impacts to below a level of significance.

### 5.2.9 AGRICULTURAL RESOURCES

As presented in Section 4.9, *Agricultural Resources*, the Project Site is not classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. It is not zoned for agricultural use and is not subject to a



Williamson Act contract. Additionally, the Project Site is not located within or adjacent to existing agricultural areas and would not implement conversion of farmland to non-agricultural use. Therefore, the project would not contribute to a cumulative loss of farmlands.

### **5.2.10 HYDROLOGY/DRAINAGE/WATER QUALITY**

As addressed by Section 4.10, *Hydrology/Drainage/Water Quality*, the project would not extract water from an aquifer, increase runoff, increase flooding, negatively affect water quality, or impact drainage patterns or impact downstream water bodies as a result of altered drainage patterns. Therefore, the project would not contribute to any cumulative hydrologic impact. The project would control drainage and runoff in accordance with City requirements. Similarly, other projects that would occur with build-out of the City's General Plan would also be required to control drainage and runoff in accordance with City requirements. Therefore, no cumulative impacts associated with hydrology, drainage, and water quality would be expected.

### **5.2.11 GEOLOGIC AND SOILS**

As presented in Section 4.11, *Geology and Soils*, design features incorporated as part of the proposed Reclamation Plan Amendment would avoid impacts associated with soils, and no mitigation would be required. Relative to site geology, there is potential that shallow failures in weathered rock could occur, resulting in potential risk. Implementation of mitigation as presented in Section 4.11 would reduce potential impacts to geology and soils to a less than significant level. . Geologic impacts associated with the project are site-specific. The proposed project would not contribute to cumulatively significant impacts related to geologic hazards or soils.

### **5.2.12 PUBLIC SERVICES AND UTILITIES**

The Project Site is the location of an on-going mining and processing operation. Mining operations include the use of heavy vehicles and machinery to extract and process minerals. Additionally, heavy trucks transport materials from the site. The Project Site is serviced by the Chula Vista Police Department and the Chula Vista Fire Department. There is no permanent sewer present on-site, but the Project Site does have water connections.

A discussion of *Public Services and Utilities* is addressed in Section 4.12. As presented in that section, the project's current demand on public services and utilities is limited, with no use of schools, libraries, or parks and recreation facilities. The proposed project would not impact public services and utilities. Thus, cumulative impacts would not result. Additionally, when considered with build-out of the City's General Plan, the project's contribution to cumulatively significant impacts would be negligible.

### **5.2.13 HAZARDS/RISK OF UPSET**

The Project Site is the location of an on-going mining and resource extraction and processing operation. Commonly used hazardous substances, such as fossil fuels, oil, lubricants, welding solutions, and solvents are used on-site for heavy equipment operation and maintenance.

Reclamation activities on the Project Site would also involve the transport of gasoline and other materials during grading and other reclamation operations, including the operation of heavy equipment. Relatively small amounts of commonly used hazardous substances, such as fossil fuels, oil, lubricants, welding solutions and solvents would be used on site for heavy equipment operation and maintenance. These materials would be transported and handled in accordance with all Federal, State, and local laws regulating the management and use of hazardous materials. The use, storage, and disposal of any hazardous materials

on or from the Project Site shall be done in compliance with applicable Federal, State, and local regulations. Actions included in the proposed Reclamation Plan Amendment, as well as specific mitigation measures outlined in Section 4.13, *Hazards/Risk of Upset*, would be implemented to ensure that potential impacts resulting from hazardous materials spillage or leaking are less than significant. Other projects would be required to adhere to Federal, State, and local regulations in a similar manner, as applicable. Therefore, the proposed project would not contribute to cumulatively significant impacts associated with health and safety.

### **5.2.14 HOUSING AND POPULATION**

The project does not propose housing or uses which would result in an increase in population. Therefore, there is no potential for the project to contribute to cumulative impacts associated with housing and population.

### **5.2.15 MINERAL RESOURCES**

Prior to implementing the proposed Reclamation Plan Amendment, on-site mineral resource would be mined to depletion. The project does not propose mining and/or resource extraction. Therefore, cumulative impacts on mineral resources would not occur.

### **5.2.16 GREENHOUSE GAS EMISSIONS**

The Project Site is the location of on-going mining and resources extraction and processing operations. Greenhouse gas emissions are present from the heavy machinery and equipment utilized on-site. Additionally, heavy trucks make regular trips to and from the Project Site to transport materials, further contributing to greenhouse gas emissions. Reclamation of the quarry site as proposed under the Reclamation Plan Amendment would result in less emission of greenhouse gases than the current mining operation. With the exception of light vehicle trips associated with intermittent maintenance of revegetated and reclaimed areas of the site, vehicular trips to and from the Project Site would be negligible, thereby reducing GHG emissions to minimal levels.

The project's potential effect on global climate change was evaluated as part of the *Air Quality Technical Report* prepared by Dudek Inc. (March 2010) (included as Appendix F to this EIR). Emissions of greenhouse gases were estimated based on the use of construction equipment and vehicle trips associated with construction activities. GHG emissions would only occur during construction of the project, which is anticipated to take approximately 11 weeks to complete. Following construction, the proposed project would not result in GHG emissions, as there would be no new mobile sources or stationary sources. As a result, the proposed project is not likely to result in a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

The project would, nonetheless, contribute cumulatively to the production of GHG emissions. Because generation of GHG emissions would occur for a very short duration (approximately 11 weeks) and no operational emissions would occur from the project, the project's contribution to GHG emissions considered on a cumulative basis would not be cumulatively considerable.



### 6.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

Section 15128 of the State CEQA Guidelines requires an EIR to contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were, therefore, not discussed in detail in the EIR. Pursuant to Section 15128 of the CEQA Guidelines, the following issue areas were determined not to have the potential to cause adverse effects, and therefore have not been addressed in detail in the EIR.

#### **RECREATION**

As the project does not propose an increase in residential units nor a specific type of land use upon completion of the reclamation plan, an increase in local or regional population would not occur as a direct result of project implementation. Reclamation actions developed in accordance with the proposed plan primarily address surface stabilization, revegetation, and aesthetic enhancements such that the site could be used for future uses as allowed under the City's General Plan and Zoning Ordinance. The proposed project would not result in an increase in population; therefore, the project would not increase the use of recreational facilities such that substantial physical deterioration of the facility would occur. The proposed Reclamation Plan Amendment would result in no impacts to Recreation.



# 7.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

As required by Section 15126.2(c) of the CEQA Guidelines, the significant irreversible environmental changes of a project shall be identified. Irreversible commitments of non-renewable resources are evaluated to assure that their use is justified. Irreversible environmental changes typically fall into three categories: primary impacts, such as the use of nonrenewable resources; secondary impacts, such as highway improvements which provide access to previously inaccessible areas; and environmental accidents associated with a project.

Reclamation of the project site entails the commitment of energy, natural resources, and construction materials. The primary energy source would be fossil fuels, representing an irreversible commitment of this resource. The proposed project does not provide highways or other access improvements to previously inaccessible areas and therefore would not commit future generations to the use of non-renewable resources for such facilities.

There is the potential for the project to have environmental accidents. Small quantities of petroleum compounds and metals could be released in the rare event of a spill or leak from equipment use or removal. In the rare event of a spill, absorbent material would be used to prevent chemicals or oils from being diverted off-site. In addition, design feature GW-1, as well as mitigation measures HAZ-1 through HAZ-4, would reduce impacts resulting from hazardous materials spillage or leaking to a less than significant level. As a result, the proposed project would not create significant irreversible changes in the form of environmental accidents.





## 8.0 GROWTH INDUCEMENT

Growth inducement is usually associated with projects that foster economic or population growth, or construct additional housing, which either directly or indirectly results in the construction of new infrastructure facilities. According to Section 15126.2 (d) of the CEQA Guidelines, “[i]t must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”

The project site is located in the Otay Ranch development of the City of Chula Vista. It is zoned as “P-C Planned Community.” The P-C zone provides for a variety of urban uses, including commercial, industrial, residential, recreational, and open space as approved through the Chula Vista General Plan.

According to current SANDAG estimates, there are approximately 77,787 housing units within the City of Chula Vista. The total population of Chula Vista is approximately 233,108 residents, resulting in an average of 3.15 persons per household.

The City of Chula Vista’s Growth Management Ordinance provides guidance to determine potential significance for growth inducement. Based on the Ordinance, a significant impact could occur if a project would:

- Exceed the City’s quality of life thresholds, outlined in the Chula Vista Municipal Code section 19.09.040, for police, fire and emergency medical, schools, libraries, parks and recreation areas, water, sewer, drainage, traffic, and air quality.

The proposed project does not call for the building of any residential, commercial, or industrial units. The only growth that will occur will be in the City’s total open space area, which will have no negative population or structural related impacts.

Environmental impacts related to physical changes to the project site are presented in the *Environmental Impact Analysis* section of this EIR. Significant effects would result for the following issue areas: Land Use, Planning, and Zoning (indirect impacts to MSCP Preserve); Noise (indirect impacts to MSCP Preserve); Biological Resources (indirect impacts to MSCP Preserve); Cultural Resources; Paleontological Resources; Hydrology/Drainage/Water Quality; Geology and Soils; and Hazards/Risk of Upset. A discussion of the project’s impacts to these environmental issue areas, as well as mitigation measures to reduce those impacts to below a level considered to be significant, are included in the following sections of this EIR:

- Section 4.1, Land Use, Planning, and Zoning
- Section 4.4, Noise
- Section 4.6, Biological Resources
- Section 4.7, Cultural Resources
- Section 4.8, Paleontological Resources
- Section 4.7, Hydrology/Drainage/Water Quality
- Section 4.11, Geology and Soils
- Section 4.13, Hazards/Risk of Upset

The proposed project would not result in a substantial increase in population in the City of Chula Vista. The proposed project also would not provide infrastructure or resources that could encourage or foster new growth. Therefore, the proposed project is not considered to be growth inducing.

## 9.0 ALTERNATIVES

In accordance with Section 15126.6(a) of the CEQA Guidelines, an EIR must contain a discussion of "a range of reasonable alternatives to a project, or the location of a project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." Section 15126.6(f) further states that "the range of alternatives in an EIR is governed by the 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice." Thus, the following discussion focuses on project alternatives that are capable of eliminating significant environmental impacts or substantially reducing them as compared to the proposed project, even if the alternative would impede the attainment of some project objectives, or would be more costly. In accordance with Section 15126.6(f)(1) of the State CEQA Guidelines, among the factors that may be taken into account when addressing the feasibility of alternatives are: (1) site suitability; (2) economic viability; (3) availability of infrastructure; (4) general plan consistency; (5) other plans or regulatory limitations; (6) jurisdictional boundaries; and (7) whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site.

As required in CEQA Guidelines Section 15126.6(a), in developing the alternatives to be addressed in this section, consideration was given regarding an alternative's ability to meet most of the basic objectives of the proposed project. These objectives are presented Section 3.0, *Project Description*, of this EIR and are re-printed below for reference.

- Provide the required contents for a Reclamation Plan as specified in PRC Section 2772 and CCR Section 3502;
- Serve as a reference manual for the mine operator to guide site reclamation consistent with the approved Reclamation Plan and to assist in regulatory compliance for operational activities;
- Serve as a compliance document for the City of Chula Vista in monitoring ongoing compliance with the reclamation plan, as approved;
- Provide for long-term stability of slopes of mined and reclaimed slopes;
- Prevent wind and water erosion by stabilizing the soil surface through proper grading and drainage; and
- Implement a revegetation program that is designed to establish self-sustaining native vegetation cover, until subsequent land development occurs.

Based on the analysis contained in Section 4.0, *Environmental Impact Analysis*, of this EIR, the proposed project would result in significant impacts to Land Use, Planning, and Zoning (indirect impacts to MSCP Preserve); Noise (indirect impacts to MSCP Preserve); Biological Resources (indirect impacts to MSCP Preserve); Cultural Resources; Paleontological Resources; Hydrology/Drainage/Water Quality; Geology and Soils; and Hazards/Risk of Upset. All other impacts were found to be less than significant. Mitigation measures have been identified, which would reduce project impacts to below a level of significance for all significant impacts.

The alternatives identified in this analysis are intended to further reduce or avoid significant environmental impacts associated with the proposed project. In accordance with Section 15126.6(c) of the State CEQA Guidelines, the following analysis of project alternatives is preceded by a brief description of the rationale for selecting the alternatives to be discussed. In addition, alternatives are identified that were considered but rejected.

## 9.1 ALTERNATIVES CONSIDERED BUT REJECTED

### Alternative Locations

In accordance with CEQA Guidelines Section 15126.6(f)(2), alternative locations for the proposed project would be considered if “*any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessens any of the significant effects of the project would need to be considered for inclusion in the EIR.*”

The proposed Otay Valley Quarry Reclamation Plan Amendment is site-specific; it has been designed for the Otay Valley Quarry and is based specifically on the requirements of the Otay Valley Quarry site. While Reclamation Plans can – and are required to – occur at other mining sites at the conclusion of mining activities, each Reclamation Plan would be different and tailored to the particular mine.

There are no other locations that would fulfill the basic project objectives of implementing a Reclamation Plan Amendment for the Otay Valley Quarry. Therefore, there are no feasible alternative locations for the proposed Otay Valley Quarry Reclamation Plan Amendment project as it is site-specific and satisfies State and local requirements for this particular project.

## 9.2 ALTERNATIVES CONSIDERED

Alternatives to the Otay Valley Quarry Reclamation Plan Amendment project are considered and discussed in this section. These include the “No Project” alternative that is mandated by CEQA and other alternatives that were developed in the course of project planning and environmental review for the proposed project.

Relative to the requirement to address a “No Project” alternative, CEQA Guidelines Section 15126.6(e) states that:

*When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the “no project” alternative will be the continuation of the existing plan, policy or operation into the future.*

*If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the “no project” alternative is the circumstance under which the project does not proceed.*

For the Otay Valley Quarry Reclamation Plan Amendment project, two No Project alternatives have been evaluated. The first is the No Project/No Build alternative, which involves no action at the conclusion of mining (estimated to be 2089) without implementation of the proposed Reclamation Plan Amendment. It should be noted that SMARA requires mining sites to be reclaimed in accordance with State and local regulations. For purposes of this alternative, however, it is assumed that reclamation of the site would not occur. The second No Project alternative describes what would reasonably be expected to occur if the proposed Reclamation Plan Amendment is not approved and the existing Otay Ranch Pit Reclamation Plan, as amended, is implemented.

Therefore, the following project alternatives are addressed in this Program EIR:

- Alternative 1 – No Project/No Build Alternative

- Alternative 2 – No Project/Development Under Existing Approvals
- Alternative 3 – Benched Alternative
- Alternative 4 – Fill Alternative

### 9.3 ALTERNATIVES ANALYSIS

The impacts of each alternative are analyzed in this section of the EIR. The review of alternatives includes an evaluation to determine if any specific environmental characteristic would have an effect that is “*substantially less*” than the proposed project. A significant effect is defined in Section 15382 of the CEQA Guidelines as “*a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project.*” The significant impacts that apply to this project are: Land Use, Planning, and Zoning (indirect impacts to MSCP Preserve); Noise (indirect impacts to MSCP Preserve); Biological Resources (indirect impacts to MSCP Preserve); Cultural Resources; Paleontological Resources; Hydrology/Drainage/Water Quality; Geology and Soils; and Hazards/Risk of Upset. Impacts to all other issue areas were found not to be significant. The discussion of alternatives provides:

- A description of the alternative considered;
- The identification of the impacts of the alternative;
- A comparative analysis of the impacts of the alternative under consideration and the proposed project. The focus of this comparative analysis is to determine if the alternative is capable of eliminating or substantially reducing the significant environmental effects of the proposed project;
- An analysis of whether the alternatives are feasible (as defined by State CEQA Guidelines, Section 15364), meet the objectives of the project (described in Section 3.0 of this EIR), and remain under consideration.

Table 9-1, *Comparison of Alternatives to Proposed Project*, included at the end of this section, provides a comparison of environmental issues for all alternatives analyzed in this section.

### 9.4 ALTERNATIVE 1 – NO PROJECT/NO BUILD

Under the No Project/No Build Alternative, existing conditions on the site at the time mining operations cease (estimated to be 2089) would remain; and implementation of the Otay Valley Quarry Reclamation Plan Amendment and associated removal of equipment, grading, revegetation, and monitoring and maintenance would not occur. None of the impacts identified for the proposed project would result from implementation of the No Project/No Build Alternative. However, it should be noted that the analysis of the project contained in Section 4.0, *Environmental Impact Analysis*, of this EIR did not identify any significant unmitigable adverse effects associated with the project. Additionally, the No Project/No Build Alternative would not meet any of the project objectives related to the stabilization of the slopes, the prevention of wind and water erosion by stabilizing the soil surface, and the implementation of a revegetation program. Furthermore, if the objectives of the Reclamation Plan Amendment were not realized, City and State (SMARA) requirements would not be met.

#### 9.4.1 Environmental Analysis

##### **Land Use, Planning, and Zoning**

The Project Site is currently zoned by the City of Chula Vista as “P-C Planned Community,” which provides for a variety of urban uses, including commercial, industrial, residential, recreational, and open space as approved through the City of Chula Vista General Plan. Final site grading and reclamation associated with

the proposed project would not occur under this alternative, and this alternative would not provide a suitable development condition to pursue land uses within the P-C zoning designation. Furthermore, this alternative would not implement the City's requirements for reclamation. Direct impacts associated with land use, planning, and zoning would be greater than the proposed project under this alternative.

The proposed project has the potential to result in indirect impacts to the adjacent MSCP Preserve. Mitigation measures would be implemented to reduce the project's indirect impacts to below a level of significance. The No Project/No Build alternative would avoid indirect impacts to the MSCP Preserve because no reclamation activities would occur.

### ***Landform Alteration/Aesthetics***

The Project Site is the location of on-going mining operations. As such, current views into the mining site from the Otay River Valley reflect the on-going mining operations. Trucks may be seen coming in and out of the quarry. Distant views of mined slopes may be possible, depending on viewpoint.

The proposed project is designed to improve the degradation of the aesthetic character of the site resulting from mining operations. The proposed project would create a water feature, as well as dramatic walls. Revegetation would occur utilizing plant species local to the area in order to blend the site with its surrounding. There would be a high degree of variation and complexity in the proposed project's aesthetic character. Under the No Project/No Build Alternative, none of these project features would be realized. The site would be left in its unreclaimed state, with erosion controls applied in accordance with City regulations. Impacts to the visual environment would be regarded as significant and greater under this alternative than the proposed project.

### ***Traffic, Circulation, and Access***

Under existing conditions, approximately 187 ADT are generated. The proposed project could generate between 20 and 30 ADT during active reclamation. Traffic associated with this alternative would be less than the proposed project, as there would be no traffic associated with reclamation activities. Traffic generated by the proposed Reclamation Plan Amendment would be substantially less than what occurs under existing conditions, would be short in duration, and is not regarded as significant.

### ***Noise***

Currently, noise is generated on the Project Site associated with mining and extraction. The proposed project would lessen the amount of noise, as less activity would occur from reclamation and would be limited in duration, reducing direct noise impacts from what occurs under existing conditions. However, potentially significant indirect noise impacts would be associated with the project's proposed reclamation activities adjacent to the MSCP Preserve. Mitigation measures would be implemented to reduce indirect noise impacts to below a level of significance.

No additional noise would be associated with the No Project/No Build Alternative, as no additional activities would occur at the completion of mining. Additionally, the No Project/No Build alternative would avoid indirect noise impacts on the MSCP Preserve, as no reclamation activities would occur under this alternative. Therefore, noise impacts would be less under this alternative than those associated with the proposed project.

***Air Quality***

Air pollutants are currently generated at the Project Site as a result of on-going mining operations. Pollutants would also be generated through implementation of the proposed Reclamation Plan Amendment; however, emissions would be substantially reduced from what occurs with the existing mine. The proposed project's air quality impacts would not be significant and would cease when reclamation activities are complete.

The No Project/No Build Alternative could result in air quality impacts, because no erosion control measures are implemented to avoid wind erosion. Therefore, impacts to air quality would be greater under this alternative than the proposed project.

***Biological Resources***

Following completing of mining activities, the Project Site will consist of a heavily disturbed site and will support very little biologically important habitat. No federally protected wetlands or biological resources exist on the 197 acres proposed to be reclaimed in accordance with the proposed Reclamation Plan Amendment. Implementation of the proposed project would involve revegetation intended to stabilize slopes and enhance aesthetics. This project benefit would not occur with the No Project/No Build Alternative.

In the case of the proposed project, indirect impacts to the adjacent MSCP Preserve would occur, and measures would be required to mitigate impacts to below a level of significance. Indirect impacts to the MSCP Preserve would not occur under the No Project/No Build Alternative, as no additional construction activities would occur following completion of mining.

***Cultural Resources***

The Project Site is the location of on-going resource extraction and processing operations. No structures of historical or cultural significance are located on-site. As a fully extracted quarry, no archeological resources or human remains exist on-site. The proposed project involves implementation of the Reclamation Plan Amendment at the completion of mining. Although a low probability, the discovery of cultural resources or human remains during reclamation activities would be considered a potentially significant impact. Mitigation would be implemented that would reduce impacts to a less than significant level.

Under the No Project/No Build Alternative, no reclamation would occur, avoiding the potential to impact unknown cultural resources or human remains. Impacts to cultural resources under this alternative would be less than the proposed project.

***Paleontological Resources***

Existing conditions on the Project Site involve resource mining and extraction which will have removed any paleontological resources prior to implementing the proposed Reclamation Plan Amendment. Proposed reclamation activities have the potential to impact unknown paleontological resources that could exist on the Project Site. Mitigation would be implemented which would reduce impacts to paleontological resources to a less than significant level.



No reclamation activities would occur under the No Project/No Build alternative, and the potential to impact unknown paleontological resources would not occur. Therefore, impacts to paleontological resources would be less than those of the proposed project under this alternative.

### ***Agricultural Resources/Forestry***

The project site is not zoned for agricultural use, is not subject to a Williamson Act contract, and is not located within an area designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (CDC 2006). Similar to the proposed project, implementation of the No Project/No Build Alternative would not incur any impacts.

### ***Hydrology/Drainage/Water Quality***

The current mining operations have the potential to impact water quality from accidental spills of toxic substances, such as gasoline, diesel fuel, lubricating oil, grease, and solvents. Implementation of the proposed project would have a similar potential, albeit reduced from what could occur with the existing mining operations due to a reduction in the amount of activities. Because no construction would be involved with the No Project/No Build alternative, the possibility for spills of materials such as gasoline, diesel fuel, and grease during reclamation would be avoided.

The proposed project is designed such that the majority of runoff would be contained on-site in the quarry pit. Under the No Project/No Build Alternative, run-off would also be contained in the depression formed by the quarry pit. However, this alternative would not include the project's design features directed at reducing stormwater runoff and surface water flows, which would result in greater impacts to water quality than the proposed project.

### ***Geology and Soils***

The Project Site is not on or adjacent to any active earthquake faults. Both the proposed Reclamation Plan Amendment and the No Project/No Build Alternative would not result in the construction of buildings or structures, and therefore would not expose people or structures to impacts related to seismic events or other hazards. Erosion control measures would be implemented as part of the proposed project to reduce impacts to soil erosion and loss of topsoil. Incorporation of these mitigation measures would reduce impacts to less than significant for the proposed project. The No Project/No Build Alternative could result in impacts to soils, because no erosion control measures are implemented to avoid soil erosion and loss of topsoil. Therefore impacts associated with soils would be greater under this alternative than the proposed project.

### ***Public Services and Utilities***

As with the existing mining operations and similar to the proposed project, the No Project/No Build Alternative project would not generate the need for any additional emergency personnel, vehicles, or equipment or affect response times or volumes. Neither the proposed project nor this alternative would create the need for any additional housing or otherwise increase population, and thus would not necessitate the need to construct facilities such as school, parks, or other public facilities. Impacts under this alternative would be less than significant and similar in nature to those caused by the proposed project. This alternative would also have similar impacts in regards to utility services as the proposed project. Similar to the proposed project, impacts to utility services such as solid waste, sewer, drainage, and electricity would not be significant.

***Hazards/Risk of Upset***

The Project Site is the location of an on-going mining and resource extraction and processing operation. Commonly used hazardous substances, such as fossil fuels, oil, lubricants, welding solutions, and solvents are used on-site for heavy equipment operation and maintenance. The proposed project would also result in the use of small amounts of hazardous substances, such as fossil fuels, oil, lubricants, welding solutions, and solvents during reclamation activities for heavy equipment operation and maintenance. In order to ensure that the potential for upset or accidents would be avoided, the proposed project would implement mitigation measures.

Potential impacts associated with use of hazardous substances and the requirement for mitigation measures would not occur under the No Project/No Build Alternative. Additionally, because this alternative would not create a water body, this alternative would not have the potential for vectors. Therefore, this alternative would result in less impacts than the proposed project.

***Housing and Population***

Impacts to Population and Housing would be similar for the No Project/No Build Alternative as for the proposed project. Neither the proposed project nor the No Project/No Build Alternative proposes any new homes or business, nor would either extend roads or other infrastructure which could potentially induce growth. The property currently consists of an aggregate quarry and associated equipment and structures, and no housing or people would be displaced because of reclamation activities. No impacts would result under either the proposed project or this alternative.

***Mineral Resources***

Under both the No Project/No Build Alternative and the proposed project, it is assumed that on-site mineral resources have been depleted. No mining would occur under with this alternative or the proposed project. Therefore, neither the No Project/No Build Alternative nor the proposed project would compromise any additional future mining; neither scenario would result in the loss of availability of a locally important mineral resource recovery site delineated on a local land use plan. As such, no impact would result.

***Greenhouse Gas Emissions***

The Project Site is the location of on-going mining and resources extraction and processing operations. Greenhouse gas emissions are present from the heavy machinery and equipment utilized on-site. Additionally, heavy trucks make regular trips to and from the Project Site to transport materials, further contributing to greenhouse gas emissions. Reclamation of the quarry site would result in less emission of greenhouse gases than the current mining operation. Additionally, with the exception of light vehicle trips associated with intermittent maintenance of revegetated and reclaimed areas of the site, vehicular trips to and from the Project Site would be negligible, thereby reducing GHG emissions to minimal levels.

The No Project/No Build Alternative would not result in the generation of GHG emissions; construction activities associated with implementation of the proposed Reclamation Plan Amendment would not occur. Therefore, this alternative would result in the generation of less GHG emissions than the proposed project. However, it should be noted that the proposed project would not result in significant impacts associated with GHG emissions.

### **9.4.2 Evaluation of Alternative**

When compared with the proposed project, the No Project/No Build Alternative would result in fewer impacts to: Traffic, Circulation, and Access; Noise (indirect impacts to MSCP Preserve); Hazards/Risk of Upset; and Greenhouse Gas Emissions. This alternative would result in a greater impacts to: Land Use, Planning, and Zoning; Landform Alteration/Aesthetics; Air Quality; Biological Resources; Geology and Soils (impacts to soils); and Hydrology/Drainage/Water Quality. All other impacts associated with the No Project/No Build Alternative would be the same as the proposed project. This alternative would not meet any of the project's objectives and would not be in compliance with State and local requirements that require reclamation of a mining site.

## **9.5 ALTERNATIVE 2 – NO PROJECT/DEVELOPMENT UNDER EXISTING APPROVALS**

Under this Alternative, the Otay Valley Quarry would be reclaimed in accordance with the existing Otay Ranch Pit Reclamation Plan. Similar to the proposed project, the Otay Ranch Pit Reclamation Plan would alter the character of the Project Site, following depletion of mining resources, by restoring the quarry to open space consisting of a variety of plants and natural habitats consistent with local topography and designed to enhance the aesthetic value of the disturbed mining site. The final reclaimed landform would consist of a mined floor area that gently slopes from the southern side of the site to the north. The mined floor would be surrounded on the north, east, and west by quarry slopes at a 2:1 average slope gradient. Approximately 400,000 cubic yards of fill, generated on-site as naturally occurring waste material from the mining operation, would be utilized to create the 2:1 slopes. The highest portion of these slopes would be approximately 300 feet above the reclaimed quarry floor. Following slope grading, a four-inch layer of topsoil would be placed over the majority of the cut rock slopes for revegetation. Revegetation with native grasses and herbaceous plant materials that provide for erosion control would occur on all fill slopes. Some areas would exhibit rock outcroppings in order to create visual interest and integrate the site with surrounding lands. A small area at the top of the quarry slopes and along the southern boundary of the site would be revegetated with Diegan coastal sage scrub.

### **9.5.1 Environmental Analysis**

#### ***Land Use, Planning, and Zoning***

The proposed Project Site is currently zoned by the City of Chula Vista as "P-C Planned Community," which provides for a variety of urban uses, including commercial, industrial, residential, recreational, and open space as approved through the City of Chula Vista General Plan. Final site grading and reclamation for both the proposed alternative and proposed project would provide a suitable development condition to pursue land uses within the Planned Community zoning designation and in accordance with the General Plan. Both the proposed project and the No Project/Development Under Existing Approvals Alternative would not result in direct land use impacts.

The proposed project has the potential to result in indirect impacts to the adjacent MSCP Preserve. Mitigation measures would be implemented to reduce the project's indirect impacts to below a level of significance. The No Project/Development Under Existing Approvals Alternative would result in similar indirect impacts to the MSCP Preserve. However, the existing Otay Ranch Pit Reclamation Plan does not call for mitigating those indirect impacts. Therefore, this alternative would result in greater indirect impacts than the proposed project.

**Landform Alteration/Aesthetics**

The Project Site is the location of on-going mining operations. As such, current views into the mining site from the Otay River Valley reflect the on-going mining operations. Trucks may be seen coming in and out of the quarry. Distant views of mined slopes may be possible, depending on viewpoint.

The proposed project is designed to improve the aesthetic character of the site resulting from mining operations. The proposed project would create a water feature, as well as dramatic walls, and would revegetate the Project Site in a manner that reflects and blends with surrounding areas. There would be a high degree of variation and complexity in the proposed project's aesthetic character.

Under the existing Otay Ranch Pit Reclamation Plan, the resultant topography would be a large flat pad rimmed with steep slopes. In this manner, this alternative may create a final landform that appears more manufactured than that which would result from the proposed project. The proposed project creates more visual interest, which results in attractive vista from off-site areas. The Otay Ranch Pit Reclamation Plan would create screening berms along the southern project boundary to block foreground views. Both the proposed project and this alternative would revegetate mined slopes to help blend with adjacent habitat. With implementation of either Reclamation Plan, impacts to aesthetics would be less than significant in both cases.

**Traffic, Circulation, and Access**

Under existing conditions, approximately 187 ADT are generated. The proposed project could generate between 20 and 30 ADT during active reclamation. Traffic associated with the proposed project would occur for a short duration (approximately 11 weeks) and would not be significant.

Traffic associated with the existing Otay Ranch Pit Reclamation Plan would be greater than the proposed project, due to an increased level of trucks accessing the site in order to fill the central portion of the quarry with approximately 400,000 cubic yards of material to create a large, relatively flat pad. Construction traffic would last for a longer period of time than traffic associated with the proposed project. This alternative would result in an increase in impacts when compared to the proposed project.

**Noise**

Currently, noise is generated on the Project Site associated with mining and extraction. The proposed project would lessen the amount of noise, as less activity would occur from reclamation and would be limited in duration, reducing direct noise impacts from what occurs under existing conditions. However, potentially significant indirect noise impacts would be associated with the project's proposed reclamation activities adjacent to the MSCP Preserve. Mitigation measures would be implemented to reduce indirect noise impacts to below a level of significance.

The No Project/Development Under Existing Approvals Alternative would result in greater noise levels for a longer period of time due to the additional grading needed to create the reclaimed quarry floor. Additionally, similar to the proposed project, this alternative would result in indirect noise impacts on the MSCP Preserve; such impacts would be increased and last for a longer period of time. Additionally, unlike the proposed project which calls for mitigating impacts on the adjacent MSCP Preserve, the existing Otay Ranch Pit Reclamation Plan does not call for mitigating those indirect impacts. Therefore, this alternative would result in greater indirect noise impacts than the proposed project. Similar to the proposed project,

following the completion of reclamation activities, noise generated would have a negligible contribution to ambient noise levels.

### **Air Quality**

Air pollutants are currently generated at the Project Site as a result of on-going mining operations. Construction of the proposed project would require a limited number of truck trips and would produce a limited amount of equipment related emissions.

The construction efforts required for this alternative would be greater than the proposed project because of additional grading and the requirement to bring in 400,000 cubic yards of fill material. Compaction and grading efforts required to create the large central pad would produce a greater amount of emissions. Therefore, this alternative could result in greater impacts to air quality than the proposed project.

### **Biological Resources**

The proposed project will consist of a heavily disturbed mined landform upon completion of mining activities and will not support biologically important habitat. No federally protected wetlands or biological resources exist on the 197-acre portion of the Project Site to be reclaimed.

Implementation of both the proposed project and the No Project/Development Under Existing Approvals Alternative would involve revegetation; in both cases the vegetation would be meant to stabilize slopes and enhance aesthetics, rather than provide habitat or improve the biological condition of the area. In the case of the proposed project, indirect impacts to the adjacent MSCP Preserve would be mitigated through project design features and incorporated mitigation measures. The existing Otay Ranch Pit Reclamation Plan does not call for mitigating those indirect impacts. Therefore, this alternative would result in greater indirect impacts associated with biological resources than the proposed project.

### **Cultural Resources**

The Project Site is the location of on-going resource extraction and processing operations. No structures of historical or cultural significance are located on-site. As a fully extracted quarry, no archeological resources or human remains exist on-site. The proposed project involves implementation of the Reclamation Plan Amendment at the completion of mining. Although a low probability, the discovery of cultural resources or human remains during reclamation activities would be considered a potentially significant impact. Mitigation would be implemented that would reduce impacts to a less than significant level.

The No Project/Development Under Existing Approvals Alternative would result similar impacts to cultural resources should they be uncovered with grading activities necessary to implement the Otay Ranch Pit Reclamation Plan. However, the Otay Ranch Pit Reclamation Plan does not include measures necessary to mitigate discovery of unknown subsurface resources. Therefore, impacts would be greater under this alternative than the proposed project.

### **Paleontological Resources**

Existing conditions on the Project Site involve resource mining and extraction which will have removed any paleontological resources prior to implementing the proposed Reclamation Plan Amendment. Proposed reclamation activities have the potential to impact unknown paleontological resources that could exist on the Project Site. Mitigation would be implemented which would reduce impacts to paleontological resources to a less than significant level.

Additional excavation is required for No Project/Development Under Existing Approvals Alternative, and excavation could occur in areas of the project site underlain by geologic formations known to contain paleontological resources. However, this alternative does not require mitigation in the event important paleontological resources are encountered during reclamation. Therefore, impacts to paleontological resources would be greater under this alternative than the proposed project.

### ***Agricultural Resources/Forestry***

The Project Site is not zoned for agricultural use, is not subject to a Williamson Act contract, and is not located within an area designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (CDC 2006). Similar to the proposed project, implementation of the No Project/Development Under Existing Approvals Alternative would not incur any impacts.

### ***Hydrology/Drainage/Water Quality***

The current mining operations have the potential to impact water quality from accidental spills of toxic substances, such as gasoline, diesel fuel, lubricating oil, grease, and solvents. Implementation of the proposed project would have a similar potential, albeit reduced from what could occur with the existing mining operations due to a reduction in the amount of activities. The No Project/Development Under Existing Approvals Alternative has the same potential for spills of materials such as gasoline, diesel fuel, and grease to occur during reclamation.

Both the No Project/Development Under Existing Approvals Alternative and the proposed project would involve cut-and-fill operations and other reclamation activities, which would likely alter on-site drainage patterns and result in wind and water erosion. However, the proposed project is designed such that the majority of runoff would be contained on-site in the water body formed in the quarry pit. The No Project/Development Under Existing Approvals Alternative, on the other hand, would create slopes that would drain runoff towards the Otay River. Additionally, because the alternative would involve a greater construction effort, the possibility for spills of materials such as gasoline, diesel fuel, and grease would be greater. While design features would be implemented to reduce stormwater runoff and surface water flows, the No Project/Development Under Existing Approvals Alternative could result in greater impacts to water quality than the proposed project.

### ***Geology and Soils***

The Project Site is not on or adjacent to any active earthquake faults. Both the proposed Reclamation Plan Amendment and the No Project/Development Under Existing Approvals Alternative do not propose the development of buildings or structures, and therefore would not expose people or structures to impacts related to seismic events or other hazards. In both cases, a State-certified Geotechnical Engineer would need to examine the final grading and/or preparation of all reclamation activities, and erosion control measures would be implemented to reduce impacts to soil erosion and loss of topsoil. Incorporation of these mitigation measures would reduce impacts to less than significant for both the proposed project and the No Project/Development Under Existing Approvals Alternative.

### ***Public Services and Utilities***

As with the existing mining operations and similar to the proposed project, the No Project/Development Under Existing Approvals Alternative would not generate the need for any additional emergency personnel, vehicles, or equipment or affect response times or volumes. This alternative does not create the need for any

additional housing or otherwise increase population, and thus would not necessitate the need to construct facilities such as school, parks, or other public facilities. Impacts would be less than significant and similar in nature to those caused by the proposed project. Implementing the No Project/Development Under Existing Approvals Alternative is anticipated to have similar impacts in regards to utility services as the proposed project. Impacts to utility services such as solid waste, sewer, drainage, and electricity would not vary significantly from the proposed project.

### ***Hazards/Risk of Upset***

The Project Site is the location of an on-going mining and resource extraction and processing operation. Commonly used hazardous substances, such as fossil fuels, oil, lubricants, welding solutions, and solvents are used on-site for heavy equipment operation and maintenance. With the proposed project, as well as under this alternative, small amounts of hazardous substances, such as fossil fuels, oil, lubricants, welding solutions, and solvents would be used on site during reclamation activities for heavy equipment operation and maintenance. While in both cases all materials would be transported and handled in accordance with all regulations, the No Project/Development Under Existing Approvals Alternative would involve a greater construction effort, and would increase the chance for upset or accidents; therefore, this alternative would result in greater impacts associated with hazards. Hazards associated with airports, emergency response plans, and wildland fires would be similar for both the proposed project and the No Project/Development Under Existing Approvals Alternative and in both cases would be less than significant. Additionally, because this alternative would not create a water body, this alternative would not have the potential for vectors.

### ***Housing and Population***

Impacts to Population and Housing would be similar for the No Project/Development Under Existing Approvals Alternative as for the proposed project. Neither project proposes any new homes or business, nor would either extend roads or other infrastructure which could potentially induce growth. The property currently consists of an aggregate quarry and associated equipment and structures, and no housing or people would be displaced because of reclamation activities. No impacts would result.

### ***Mineral Resources***

The reclamation plans and activities proposed for the No Project/Development Under Existing Approvals Alternative and the proposed project would not compromise any additional future mining nor would implementation of the plans result in the loss of availability of a locally important mineral resource recovery site delineated on a local land use plan. As such, no impact would result.

### ***Greenhouse Gas Emissions***

The Project Site is the location of on-going mining and resources extraction and processing operations. Greenhouse gas emissions are present from the heavy machinery and equipment utilized on-site. Additionally, heavy trucks make regular trips to and from the Project Site to transport materials, further contributing to greenhouse gas emissions. Reclamation of the quarry site would result in less emission of greenhouse gases than the current mining operation. Additionally, with the exception of light vehicle trips associated with intermittent maintenance of revegetated and reclaimed areas of the site, vehicular trips to and from the Project Site would be negligible, thereby reducing GHG emissions to minimal levels.

The No project/Development Under Existing Approvals Alternative would result in the generation of more GHG emissions than the proposed project, because more grading would be required to implement the Otay



Ranch Pit Reclamation Plan. Therefore, there is the potential that there would be an increase in GHG emissions under this alternative and impacts would be greater than the proposed project.

### **9.5.2 Evaluation of Alternative**

The No Project/Development Under Existing Approvals Alternative would result in significantly greater impacts than the proposed project due to additional construction efforts required to transport 400,000 cubic yards of fill material (and concomitant increase in air quality and greenhouse gas impacts) and grade the hillside to blend with the surrounding area and slope gradients. The additional truck trips and equipment requirements would result in additional impacts to Land Use, Planning, and Zoning; Traffic, Circulation, and Access; Noise; Air Quality; Biological Resources; Cultural Resources; Paleontological Resources; Hydrology/Drainage/Water Quality; Hazards/Risk of Upset; and Greenhouse Gas Emissions. Impacts to GHG Emissions would also be increased. Impacts associated with other environmental issues would be similar or the same as the proposed project. While this alternative would generally meet the project objectives, this alternative would result in an increase in environmental effects, and there are no impacts associated with the proposed project that would be reduced or avoided with this alternative.

## **9.6 ALTERNATIVE 3 – BENCHED ALTERNATIVE**

Under this alternative, approximately 45 acres would be leveled and prepared to a condition suitable for subsequent development. Cut surfaces would be graded to slopes with an elevation rise of 2:1 to ensure long-term stability and, where feasible, level benches would be revegetated with hydromulch and seed. Approximately 14 acres of the quarry floor would be backfilled to create a more or less level rock surface. There would be no external drainage for the quarry floor and all surface water from the walls of the quarry would accumulate on the floor. A sufficiently thick layer of about seven feet of soil would be placed on the quarry floor in order to contain the annual cumulative rainfall without extensive ponding on the surface. Under this alternative, the revegetation of the quarry floor would be designed so that a minimum of one species of the plant community has a significant part of its root system at every level within the quarry floor reclamation soil profile, thus maximizing water use.

### **9.6.1 Environmental Analysis**

#### ***Land Use, Planning, and Zoning***

The Project Site is currently zoned by the City of Chula Vista as “P-C Planned Community,” which provides for a variety of urban uses, including commercial, industrial, residential, recreational, and open space as approved through the City of Chula Vista General Plan. Final site grading and reclamation for both the proposed project and Benched Alternative would provide a suitable development condition to pursue land uses within the Planned Community zoning designation and in accordance with the General Plan. Direct impacts associated with land use, planning, and zoning would not occur with either the proposed project or this alternative.

The proposed project has the potential to result in indirect impacts to the adjacent MSCP Preserve. Mitigation measures would be implemented to reduce the project’s indirect impacts to below a level of significance. The Benched Alternative would result in similar indirect impacts to the MSCP Preserve, and mitigation would be required to reduce indirect impacts to below a level of significance in the same manner as the proposed project. Therefore, this alternative would result in the same indirect impacts as the proposed project.

**Landform Alteration/Aesthetics**

The Project Site is the location of on-going mining operations. As such, current views into the mining site from the Otay River Valley reflect the on-going mining operations. Trucks may be seen coming in and out of the quarry. Distant views of mined slopes may be possible, depending on viewpoint.

Both the proposed project and the Benched Alternative are designed to reclaim the Otay Quarry mining site and improve the aesthetic quality of the area following the conclusion of mining activities. However, this alternative lacks some of the qualities included in the proposed plan that are specifically intended to improve the aesthetic character of the site. These qualities include the formation of a water body at the bottom of the quarry in addition to the formation of steep, dramatic walls to provide variation in the uniformity of the slopes. The alternative, on the other hand, would consist primarily of high walls with revegetated mine benches and a final slope that would not exceed 2:1. The feasibility of revegetation would be limited to only some of the benches, and thus much of the views of the site would be of rock ledges similar to those exposed during mining operations. The proposed project would improve the aesthetic character of the site to a greater degree than this alternative. Impacts to aesthetics resulting from the Benched Alternative would be considered greater than the proposed project.

**Traffic, Circulation, and Access**

Under existing conditions, approximately 187 ADT are generated. The proposed project could generate between 20 and 30 ADT during active reclamation. Traffic patterns and volumes generated from the proposed project and the Benched Alternative reclamation activities are expected to be less than existing conditions associated with current mining operations, and each phase of reclamation would be short-term in nature. Trip generation would not exceed any level of service standards. For both this alternative and proposed project, ingress and egress to the site would be monitored at the gated site entrance. All impacts are expected to be less than significant and the same for both scenarios.

**Noise**

Currently, noise is generated on the Project Site associated with mining and extraction. The proposed project would lessen the amount of noise, as less activity would occur from reclamation and would be limited in duration, reducing direct noise impacts from what occurs under existing conditions. However, potentially significant indirect noise impacts would be associated with the project's proposed reclamation activities adjacent to the MSCP Preserve. Mitigation measures would be implemented to reduce indirect noise impacts to below a level of significance.

Impacts to noise from the Benched Alternative are expected to be similar to impacts from the proposed project. In both cases, reclamation activities would generate noise in the short-term; however, the noise levels would not exceed City standards and would be substantially less than noise associated with mining activities. Thus, direct noise impacts would be less than significant under both the proposed project and this alternative. Following the completion of revegetation, impacts to noise are anticipated to be similar for both cases, and noise generated would have a negligible contribution to ambient noise levels.

Relative to indirect noise impacts, both the proposed project and the Benched Alternative would result in impacts to the adjacent MSCP Preserve. This alternative would require implementation of mitigation measures to reduce impacts to below a level of significance as are required for the proposed project.

***Air Quality***

Air pollutants are currently generated at the Project Site as a result of on-going mining operations. Pollutants would also be generated through implementation of the proposed Reclamation Plan Amendment; however, emissions would be substantially reduced from what occurs with the existing mine. The proposed project's air quality impacts would not be significant and would cease when reclamation activities are complete.

Under this alternative, potential impacts in regards to air quality would be similar to the proposed project, since construction and operations would be similar in both cases. In neither case are air quality standards expected to be exceeded, nor are activities expected to conflict with the San Diego Air Pollution Control District's air quality plans.

***Biological Resources***

The proposed project will consist of a heavily disturbed mined landform upon completion of mining activities and will not support biologically important habitat. No federally protected wetlands or biological resources exist on the 197-acre portion of the Project Site to be reclaimed.

In both the case of the Benched Alternative and the proposed project, the reclamation includes revegetation that is meant to stabilize the slopes and soil surfaces and to enhance aesthetics. Both the proposed project and the Benched Alternative have the potential to result in indirect impacts to the adjacent MSCP Preserve. Similar to the proposed project, indirect impacts to special status plant and animal species and the MSCP Preserve would be avoided by this alternative through project design features and incorporated mitigation measures. and in neither case would impacts to biological resources be significant.

***Cultural Resources***

The Project Site is the location of on-going resource extraction and processing operations. No structures of historical or cultural significance are located on-site. As a fully extracted quarry, no archeological resources or human remains exist on-site. The proposed project involves implementation of the Reclamation Plan Amendment at the completion of mining. Although a low probability, the discovery of cultural resources or human remains during reclamation activities would be considered a potentially significant impact. Mitigation would be implemented that would reduce impacts to a less than significant level.

Impacts to cultural resources would be the same for the Benched Alternative as for the proposed project, since in both cases the areas proposed for reclamation would have been subjected to excavation and other mining related activities that would most likely remove any cultural resources. Reclamation activities such as grading, backfilling, and compaction would be similar with both the proposed alternative and proposed project, creating the potential that unknown subsurface resources could be encountered. The Benched Alternative would be required to incorporate mitigation measures similar to the proposed project. Therefore, impacts under this alternative would be the same as those that could occur with the proposed project.

***Paleontological Resources***

Existing conditions on the project site involve resource mining and extraction which will have removed any paleontological resources prior to implementing the proposed Reclamation Plan Amendment. Proposed reclamation activities have the potential to impact unknown paleontological resources that could exist on

the Project Site. Mitigation would be implemented which would reduce impacts to paleontological resources to a less than significant level.

For both the proposed project and the Benched Alternative, impacts to paleontological resources would be the same. In both cases, while impacts are not anticipated, in the unlikely event that important paleontological resources are encountered, mitigation measures would be implemented to ensure that impacts are reduced to below a level of significance.

### **Agricultural Resources/Forestry**

The project site is not zoned for agricultural use, is not subject to a Williamson Act contract, and is not located within an area designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (CDC 2006). Similar to the proposed project, implementation of the Benched Alternative would not incur any impacts.

### **Hydrology/Drainage/Water Quality**

Both the Benched Alternative and proposed project would involve cut-and-fill operations and other reclamation activities, which would likely alter on-site drainage patterns and result in wind and water erosion. In both cases, all runoff would be contained on site and would not contaminate any off-site surface water bodies. The Benched Alternative, however, does not propose the formation of a lake in the quarry pit area to retain groundwater and serve as a retention basin for site runoff. This alternative has the potential to result in an increase in impacts when compared to the proposed project.

The current mining operations have the potential to impact water quality from accidental spills of toxic substances, such as gasoline, diesel fuel, lubricating oil, grease, and solvents. The proposed project, as well as the Benched Alternative, would have a similar potential to affect water quality, albeit reduced from what could occur with the existing mining operations due to a reduction in the amount of activities. Both the proposed project and the Benched Alternative would implement design features and mitigation measures which would reduce impacts to below a level of significance.

### **Geology and Soils**

The Project Site is not on or adjacent to any active earthquake faults. Neither the proposed Reclamation Plan Amendment nor the Benched Alternative would involve the development of buildings or structures, and therefore would not expose people or structures to impacts related to seismic events or other hazards. In both cases, a State-certified Geotechnical Engineer would need to examine the final grading and/or preparation of all reclamation activities, and erosion control measures would be implemented to reduce impacts to soil erosion and loss of topsoil. Incorporation of these mitigation measures would reduce impacts to less than significant for both the proposed project and the Benched Alternative.

### **Public Services and Utilities**

As with the existing mining operations and what would be associated with the proposed project, the Benched Alternative would not generate the need for any additional emergency personnel, vehicles, or equipment or affect response times or volumes. This alternative does not create the need for any additional housing or otherwise increase population, and thus would not necessitate the need to construct facilities such as school, parks, or other public facilities. Impacts would be less than significant and similar in nature to those associated with the proposed project. Implementing the Benched Alternative is anticipated to have similar impacts in regards to utility services as the proposed project. Impacts to utility services such as solid

waste, sewer, drainage, and electricity would not vary significantly from the proposed project.

### **Hazards/Risk of Upset**

The Project Site is the location of an on-going mining and resource extraction and processing operation. Commonly used hazardous substances, such as fossil fuels, oil, lubricants, welding solutions, and solvents are used on-site for heavy equipment operation and maintenance. Both the Benched Alternative and proposed project would require similar reclamation activities, both of which would involve the transport of hazardous materials. Both the proposed project and the Benched Alternative would require the incorporation of mitigation measures in order to ensure impacts are less than significant. The Benched Alternative would be the same as the proposed project in terms of impacts relating to hazards and hazardous materials, and in both cases impacts would be less than significant with incorporation of mitigation measures. Additionally, because this alternative would not create a water body, this alternative would not have the potential for vectors.

### **Housing and Population**

Impacts to housing and population would be the same for the Benched Alternative and the proposed project. Neither proposes any new homes or business and would not extend roads or other infrastructure, and thus would not induce growth. The property currently consists of an aggregate quarry and associated equipment and structures and no housing or people would be displaced because of reclamation activities. No impacts would result.

### **Mineral Resources**

The reclamation plans and activities proposed for the Benched Alternative and the proposed project would not compromise any additional future mining nor would implementation of the plans result in the loss of availability of a locally important mineral resource recovery site delineated on a local land use plan. As such, no impact would result.

### **Greenhouse Gas Emissions**

The Project Site is the location of on-going mining and resources extraction and processing operations. Greenhouse gas emissions are present from the heavy machinery and equipment utilized on-site. Additionally, heavy trucks make regular trips to and from the Project Site to transport materials, further contributing to greenhouse gas emissions. Reclamation of the quarry site would result in less emission of greenhouse gases than the current mining operation. Additionally, with the exception of light vehicle trips associated with intermittent maintenance of revegetated and reclaimed areas of the site, vehicular trips to and from the Project Site would be negligible, thereby reducing GHG emissions to minimal levels.

For both the proposed project and the Benched Alternative, impacts to GHG emissions would be similar, since construction and operations would be similar in both cases. In both cases, they are anticipated to be less than significant.

### **9.6.2 Evaluation of Alternative**

The Benched Alternative would result in similar or the same impacts as the proposed project, with the exception of Landform Alteration/Aesthetics and Hydrology/Drainage/Water Quality. While this alternative would generally meet the project objectives, there are no impacts associated with the proposed project that would be reduced or avoided with this alternative.

## **9.7 ALTERNATIVE 4 – FILL ALTERNATIVE**

The Fill Alternative would consist of bringing in material from off-site to fill the pit formed by mining and restore Rock Mountain back to its original shape. The original slopes of the quarry pit area would be reformed to be consistent with the shape and gradient of the slopes on the northern side that remained intact during mining operations. Restored slopes would be vegetated to ensure stability and improve the aesthetics of the site. The Fill Alternative would require locating sufficient material to fill the pit formed by mining operations. Implementation of this alternative would take substantially longer than the proposed project because of the amount of fill that would be need to be brought in and recontouring of the site. The collection of the fill material and transport to the Project Site would result in significant impacts, as discussed below.

### **9.7.1 Environmental Analysis**

#### ***Land Use, Planning, and Zoning***

The proposed Project Site is currently zoned by the City of Chula Vista as “P-C Planned Community,” which provides for a variety of urban uses, including commercial, industrial, residential, recreational, and open space as approved through the City of Chula Vista General Plan. Final site grading and reclamation for both the Fill Alternative and proposed project would provide a suitable development condition to pursue land uses within the Planned Community zoning designation and in accordance with the General Plan. Neither the proposed project or the Fill Alternative would result in significant direct land use, planning, or zoning impacts.

The proposed project has the potential to result in indirect impacts to the adjacent MSCP Preserve. Mitigation measures would be implemented to reduce the project’s indirect impacts to below a level of significance. The Fill Alternative would result in greater indirect impacts to the MSCP Preserve, because impacts under the Fill Alternative would occur over a longer time period. Similar to the proposed project, mitigation measures would be required to reduce indirect impacts to below a level of significance in the same manner as the proposed project.

#### ***Landform Alteration/Aesthetics***

The Project Site is the location of on-going mining operations. As such, current views into the mining site from the Otay River Valley reflect the on-going mining operations. Trucks may be seen coming in and out of the quarry. Distant views of mined slopes may be possible, depending on viewpoint.

The proposed project is designed to improve the aesthetic character of the site resulting from mining operations. The proposed project would create a water feature, as well as dramatic walls and a revegetated landscape. There would be a high degree of variation and complexity in the proposed project’s aesthetic character.

The Fill Alternative would return the site to a shape similar to what existed before mining operations. This would consist of moderately sloped hillsides covered with grasses and shrubs. While the alternative would lack the variation of the proposed project, it would blend with the existing character of the project vicinity to a greater degree than the proposed project. In both cases, the aesthetic character would be improved from the site character at the end of mining operations. Implementation of the proposed project would

result in more variation and interest while the Fill Alternative would blend more with the natural character of the project vicinity. Impacts to aesthetics would be less than significant in both cases. However, the Fill Alternative would better emulate the existing landform prior to mining; therefore, impacts would be regarded as less under this alternative when compared to the proposed project.

### **Traffic, Circulation, and Access**

Under existing conditions, approximately 187 ADT are generated. The proposed project could generate between 20 and 30 ADT during active reclamation. The Fill Alternative would require a significant amount of additional truck trips to bring fill into the project site from off-site locations. While the truck trips would only last for the time necessary to complete reclamation, the amount of traffic generated could potentially have significant impacts not associated with the proposed project. Therefore, traffic and circulation impacts under this alternative would be greater than those associated with the proposed project. Following completion of reclamation activities, traffic associated with both the proposed project and the Fill Alternative would be negligible.

### **Noise**

Currently, noise is generated on the Project Site associated with mining and extraction. The proposed project would lessen the amount of noise, as less activity would occur from reclamation and would be limited in duration, reducing direct noise impacts from what occurs under existing conditions. However, potentially significant indirect noise impacts would be associated with the project's proposed reclamation activities adjacent to the MSCP Preserve. Mitigation measures would be implemented to reduce indirect noise impacts to below a level of significance.

The Fill Alternative would involve a significantly greater number of truck trips, as well as the operation of additional construction equipment to fill and reform the slopes back to their original shape. Additional noise would be associated with this increased construction effort. This would increase indirect noise impacts on the MSCP Preserve. Noise would only be generated during construction needed to implement this alternative; however, noise would occur for a longer period of time with this alternative than would with the proposed project because of the increase amount of construction activity required. Similar to the proposed project, following the completion of reclamation activities, noise generated would have a negligible contribution to ambient noise levels. In both cases, the noise levels would adhere to City regulations and thus impacts would be less than significant. Nonetheless, noise associated with this alternative would be greater than that associated with the proposed project.

### **Air Quality**

Air pollutants are currently generated at the Project Site as a result of on-going mining operations. Pollutants would also be generated through implementation of the proposed Reclamation Plan Amendment; however, emissions would be substantially reduced from what occurs with the existing mine. The proposed project's air quality impacts would not be significant and would cease when reclamation activities are complete.

Construction of the proposed project would require a limited number of truck trips and would produce a limited amount of equipment related emissions. The construction efforts required for Fill Alternative would be significantly greater than the proposed project. Fill material would need to be trucked in from off-site and would require a significant amount of truck trips. The compaction and grading efforts required to shape the fill to match the existing slopes would also produce a significantly greater amount of emissions.



Therefore, the Fill Alternative would result in significantly greater impacts to air quality than the proposed project.

### **Biological Resources**

The proposed project would consist of a heavily disturbed site upon completion of mining activities and would support very little biologically important habitat. No federally protected wetlands or biological resources exist on the 197-acre portion of the Project Site being reclaimed.

Implementation of the proposed project and the Fill Alternative would both involve revegetation; in both cases the vegetation would be meant to stabilize slopes and enhance aesthetics. Both the proposed project and the Fill Alternative have the potential to result in indirect impacts to the adjacent MSCP Preserve. Similar to the proposed project, significant indirect impacts of the Fill Alternative to the MSCP Preserve would be avoided through project design features and incorporated mitigation measures, and in neither case would impacts to biological resources be significant. The Fill Alternative would, however, involve a significantly greater construction effort, involving a greater amount of dust, soil erosion, and water runoff, that would result in greater indirect impacts to the MSCP Preserve. Therefore, impacts to biological resources would be greater under this alternative than the proposed project.

### **Cultural Resources**

The Project Site is the location of on-going resource extraction and processing operations. No structures of historical or cultural significance are located on-site. As a fully extracted quarry, no archeological resources or human remains exist on-site.

The proposed project involves implementation of the Reclamation Plan Amendment at the completion of mining. Although a low probability, the discovery of cultural resources or human remains during reclamation activities would be considered a potentially significant impact. Mitigation would be implemented that would reduce impacts to a less than significant level. Impacts to cultural resources would be similar for the Fill Alternative. Mitigation measures like those required for the proposed project would be required to ensure that impacts are reduced to below a level of significance.

### **Paleontological Resources**

Existing conditions on the Project Site involve resource mining and extraction which will have removed any paleontological resources prior to implementing the proposed Reclamation Plan Amendment. Proposed reclamation activities have the potential to impact unknown paleontological resources that could exist on the Project Site. Mitigation would be implemented which would reduce impacts to paleontological resources to a less than significant level.

For both the proposed project and the Fill Alternative, impacts to paleontological resources would be the same. In both cases, while impacts are not anticipated, in the unlikely event that important paleontological resources are encountered, mitigation measures would be implemented to ensure that impacts are reduced to below a level of significance.

### **Agricultural Resources/Forestry**

The project site is not zoned for agricultural use, is not subject to a Williamson Act contract, and is not located within an area designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (CDC 2006). Similar to the proposed project, implementation of the Fill Alternative would not incur any impacts.

**Hydrology/Drainage/Water Quality**

Both the Fill Alternative and the proposed project would involve cut-and-fill operations and other reclamation activities, which would alter on-site drainage patterns and result in wind and water erosion. The proposed project is designed such that the majority of runoff would be contained on-site in the water body formed in the quarry pit. The Fill Alternative, on the other hand, would create slopes that would drain runoff towards the Otay River, creating impacts that would not occur with the proposed project.

The current mining operations have the potential to impact water quality from accidental spills of toxic substances, such as gasoline, diesel fuel, lubricating oil, grease, and solvents. The proposed project would have a similar potential to affect water quality, albeit reduced from what could occur with the existing mining operations due to a reduction in the amount of activities. The proposed project would implement design features and mitigation measures which would reduce impacts to below a level of significance. Because the Fill Alternative would involve a greater construction effort, the possibility for spills of materials such as gasoline, diesel fuel, and grease would increase. While design features would be implemented to reduce stormwater runoff and surface water flows, the Fill Alternative would result in greater impacts to water quality than the proposed project.

**Geology and Soils**

The Project Site is not on or adjacent to any active earthquake faults. Both the proposed Reclamation Plan Amendment and the Fill Alternative do not propose the development of buildings or structures, and therefore would not expose people or structures to impacts related to seismic events or other hazards. In both cases, a State-certified Geotechnical Engineer would need to examine the final grading and/or preparation of all reclamation activities, and erosion control measures would be implemented to reduce impacts to soil erosion and loss of topsoil. Incorporation of these mitigation measures would reduce impacts to less than significant for both the proposed project and the Fill Alternative.

**Public Services and Utilities**

As with the existing mining operations and similar to the proposed project, the Fill Alternative would not generate the need for any additional emergency personnel, vehicles, or equipment or affect response times or volumes. This alternative would not create the need for any additional housing or otherwise increase population, and thus would not necessitate the need to construct facilities such as school, parks, or other public facilities. Impacts would be less than significant and similar in nature to those caused by the proposed project. Implementing the Fill Alternative reclamation plan is anticipated to have similar impacts in regards to utility services as the proposed project. Impacts to utility services such as solid waste, sewer, drainage, and electricity would not vary significantly from the proposed project.

**Hazards/Risk of Upset**

The Project Site is the location of an on-going mining and resource extraction and processing operation. Commonly used hazardous substances, such as fossil fuels, oil, lubricants, welding solutions, and solvents are used on-site for heavy equipment operation and maintenance.

For both the Fill Alternative and the proposed project, small amounts of hazardous substances, such as fossil fuels, oil, lubricants, welding solutions, and solvents would be used on site during reclamation activities for heavy equipment operation and maintenance. While in both cases all materials would be transported and handled in accordance with all regulations, the Fill Alternative would involve a greater

construction effort, and would increase the chance for upset or accidents; therefore, this alternative would result in greater impacts to hazards than the proposed project. Hazards associated with airports, emergency response plans, and wildland fires would be similar for both the proposed project and the Fill Alternative and in both cases would be less than significant. Additionally, because this alternative would not create a water body, this alternative would not have the potential for vectors.

### **Housing and Population**

Impacts to housing and population would be the same for the Fill Alternative and the proposed project. Neither would construct new homes or businesses, nor would either extend roads or other infrastructure which could potentially induce growth. The property currently consists of an aggregate quarry and associated equipment and structures and no housing or people would be displaced because of reclamation activities. No impacts would result.

### **Mineral Resources**

The reclamation plans and activities proposed for the Fill Alternative and proposed project would not compromise any additional future mining nor would implementation of the plans result in the loss of availability of a locally important mineral resource recovery site delineated on a local land use plan. As such, no impact would result.

### **Greenhouse Gas Emissions**

The Project Site is the location of on-going mining and resources extraction and processing operations. Greenhouse gas emissions are present from the heavy machinery and equipment utilized on-site. Additionally, heavy trucks make regular trips to and from the Project Site to transport materials, further contributing to greenhouse gas emissions. Reclamation of the quarry site would result in less emission of greenhouse gases than the current mining operation. Additionally, with the exception of light vehicle trips associated with intermittent maintenance of revegetated and reclaimed areas of the site, vehicular trips to and from the Project Site would be negligible, thereby reducing GHG emissions to minimal levels.

The Fill Alternative would generate greater GHG emissions than the proposed project. The increase in GHG emissions would be associated with the increased truck trips required to bring in material to fill the site.

### **9.7.2 Evaluation of Alternative**

The Fill Alternative would result in significantly greater impacts than the proposed project due to additional construction efforts required to transport fill material and grade the hillside to blend with the surrounding area and slope gradients. The additional truck trips and equipment requirements would result in additional impacts to Traffic, Circulation and Access; Noise; Air Quality; Biological Resources; Hydrology/Drainage/Water Quality; Hazards/Risk of Upset; and GHG Emissions. This alternative would result in less impacts to Landform Alteration/Aesthetics because it would leave the site in a manner that reflects the pre-existing landform to a greater extent. Implementation of the proposed project would result in more variation and interest while the Fill Alternative would blend more with the natural character of the project vicinity. All other impacts would be the same as the project project. This alternative would implement the project's objectives.

## 9.8 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The environmental analysis of alternatives presented above is summarized in Table 9-1, *Comparison of Alternatives to Proposed Project*. CEQA requires that the EIR identify the environmentally superior alternative among all of the alternatives considered, including the proposed project. If the No Project alternative is selected as environmentally superior, then the EIR shall also identify an environmentally superior alternative among the other alternatives.

None of the above alternatives are considered “environmentally superior” to the proposed project. The No Project/No Build alternative does not satisfy project objectives and would actually result in a greater impact because the enhancements to the site through reclamation would not be realized. Additionally, that alternative would not be in compliance with state and local regulations that require reclamation of a mine site upon completing of mining. The Fill alternative could be considered the “environmentally superior” alternative, as it would leave the site in a manner that would, over time, be more reflective of the natural landform. However, implementation of that alternative would result in substantially greater environmental impacts associated with several other environmental issues.

**Table 9-1. Comparison of Alternatives to Proposed Project**

Environmental Issue Area	Proposed Project	Alternative 1 – No Project/ No Build	Alternative 2 – No Project/ Development Under Existing Approvals	Alternative 3 – Benched Alternative	Alternative 4 – Fill Alternative
Land Use, Planning and Zoning	Significant indirect impacts to adjacent MSCP Preserve. Mitigation required to reduce impacts to below significance.	Greater than proposed project.	Greater than proposed project.	Same as proposed project.	Same as proposed project.
Landform Alteration/ Aesthetics	Less than significant.	Greater than proposed project.	Same as proposed project.	Greater than proposed project.	Less than proposed project.
Traffic, Circulation, and Access	Less than significant.	Less than proposed project.	Greater than proposed project.	Same as proposed project.	Greater than proposed project.
Noise	Significant indirect impacts to adjacent MSCP Preserve. Mitigation required to reduce impacts to below significance.	Less than proposed project.	Greater than proposed project.	Same as proposed project.	Greater than proposed project.
Air Quality	Not significant.	Greater than proposed project.	Greater than proposed project.	Same as proposed project.	Greater than proposed project.
Biological Resources	Significant indirect impacts to adjacent MSCP Preserve. Mitigation required to reduce impacts to below significance.	Greater than proposed project.	Greater than proposed project.	Same as proposed project.	Greater than proposed project.

Environmental Issue Area	Proposed Project	Alternative 1 – No Project/ No Build	Alternative 2 – No Project/ Development Under Existing Approvals	Alternative 3 – Benched Alternative	Alternative 4 – Fill Alternative
Cultural Resources	Potentially significant. Mitigation required to reduce impacts to below significance.	Less than proposed project.	Greater than proposed project.	Same as proposed project.	Same as proposed project.
Paleontological Resources	Potentially significant. Mitigation required to reduce impacts to below significance.	Same as proposed project.	Geater than proposed project.	Same as proposed project.	Same as proposed project.
Agricultural Resources/Forestry	Not significant.	Same as proposed project.	Same as proposed project.	Same as proposed project.	Same as proposed project.
Hydrology/ Drainage/Water Quality	Potentially significant. Project BMPs incorporated to reduce impacts to below significance.	Greater than proposed project.	Greater than proposed project.	Greater than proposed project.	Greater than proposed project.
Geology and Soils	Potentially significant. Mitigation required to reduce impacts to below significance.	Greater than proposed project.	Same as proposed project.	Same as proposed project.	Same as proposed project.
Public Services and Utilities	Not significant.	Same as proposed project.	Same as proposed project.	Same as proposed project.	Same as proposed project.
Hazards/Risk of Upset	Potentially significant. Mitigation required to reduce impacts to below significance.	Less than proposed project.	Greater than proposed project.	Same as proposed project.	Greater than proposed project.
Housing and Population	Not significant.	Same as proposed project.	Same as proposed project.	Same as proposed project.	Same as proposed project.
Mineral Resources	Not significant.	Same as proposed project.	Same as proposed project.	Same as proposed project.	Same as proposed project.
Greenhouse Gas Emissions	Less than significant.	Less than proposed project.	Greater than proposed project.	Same as proposed project.	Greater than proposed project.

# 10.0 MITIGATION MONITORING AND REPORTING PROGRAM

This Mitigation Monitoring Reporting Program (MMRP) was prepared by the City of Chula Vista for the Otay Valley Quarry Reclamation Plan Amendment project to comply with Assembly Bill 3180, which requires public agencies to adopt such programs to ensure effective implementation of mitigation measures. This monitoring program is dynamic in that it will undergo changes as additional mitigation measures are identified and additional conditions are placed on the project throughout the project approval process.

This monitoring program will serve a dual purpose of verifying completion of the mitigation measures for the proposed project and generating information on the effectiveness of the mitigation measures to guide future decisions. The program includes the following:

- Monitoring team qualifications
- Specific monitoring activities
- Reporting system
- Criteria for evaluating the success of the mitigation measures

The proposed Otay Valley Quarry Reclamation Plan Amendment project proposes a Reclamation Plan Amendment, in accordance with SMARA and City regulations, for the Otay Valley Quarry. Reclamation would take place on approximately 197 acres of the 278-acre quarry. The Reclamation Plan Amendment would be implemented when mineral resources at the site have been depleted, estimated to be about the year 2089.

The EIR, incorporated herein as referenced, focused on issues determined to be potentially significant by the City of Chula Vista. The issues addressed in the EIR include:

- |                                   |   |
|-----------------------------------|---|
| ▪ Land Use, Planning, and Zoning  | ▪ Hydrology/Drainage/Water Quality  |
| ▪ Landform Alteration/Aesthetics  | ▪ Geology and Soils   |
| ▪ Traffic, Circulation and Access | ▪ Public Services and Utilities – including Compliance with the City Threshold and Standards Policy |
| ▪ Noise                           | ▪ Hazard/Risk of Upset  |
| ▪ Air Quality                     | ▪ Housing and Population  |
| ▪ Biological Resources            | ▪ Greenhouse Gas Emissions  |
| ▪ Cultural Resources              |   |
| ▪ Paleontological Resources       |   |
| ▪ Agricultural Resources          |   |

Potentially significant impacts would require mitigation for the following issues:

- Land Use, Planning, and Zoning
- Noise
- Biological Resources
- Cultural Resources
- Paleontological Resources
- Hydrology/Drainage/Water Quality
- Hazards/Risk of Upset
- Geology and Soils

### 10.1 MITIGATION MONITORING TEAM

A monitoring team should be identified once the mitigation measures have been adopted as conditions of approval by the Chula Vista City Council. Managing the team would be the responsibility of the Mitigation Monitor (MM). The monitoring activities would be accomplished by Environmental Monitors (EMs), Environmental Specialists (ESs), and the MM. While specific qualifications should be determined by the City of Chula Vista, the monitoring team should possess the following capabilities:

- Interpersonal, decision-making, and management skills with demonstrated experience in working under trying field circumstances;
- Knowledge of and appreciation for the general environmental attributes and special features found in the project area;
- Knowledge of the types of environmental impacts associated with construction of cost-effective mitigation options; and
- Excellent communication skills.

The responsibilities of the MM throughout the monitoring effort include the following:

- Implement and manage the monitoring program;
- Provide quality control for the site-development monitoring;
- Administrate and prepare daily logs, status reports, compliance reports, and the final construction monitoring;
- Act as a liaison between the City of Chula Vista and the applicant's contractors;
- Monitor on-site, day-to-day construction activities, including the direction of EMs and ESs in the understanding of all permit conditions, site-specific project requirements, construction schedules, and environmental quality control effort;
- Ensure contractor knowledge of and compliance with all appropriate permit conditions;
- Review all construction impact mitigation and, if need be, modify existing mitigation or proposed additional mitigation;
- Have the authority to require correction of observed activities that violate project environmental conditions or that represent unsafe or dangerous conditions; and
- Maintain prompt and regular communication with the on-site EMs and ESs and personnel responsible for contractor performance and permit compliance.

The primary role of the EM is to serve as an extension of the MM in performing the quality control functions at the construction sites. Their responsibilities and functions are to:



- Maintain a working knowledge of the Otay Valley Quarry Reclamation Plan Amendment project permit conditions, contract documents, construction schedules, and any special mitigation requirements for his or her assigned construction area;
- Assist the MM and the applicant's construction contractors in coordinating with City of Chula Vista compliance activities;
- Observe construction activities for compliance with the City of Chula Vista permit conditions; and
- Provide frequent verbal briefings to the MM and construction personnel, and assist the MM as necessary in preparing status reports.

The primary role of the ESs is to provide expertise when environmentally sensitive issues occur throughout the development phases of project implementation and to provide direction for mitigation.

### 10.2 PROGRAM PROCEDURAL GUIDELINES

Prior to any construction activities, meetings should take place between all the parties involved to initiate the monitoring program and to establish the responsibility and authority of the participants. Mitigation measures that need to be defined in greater detail will be addressed prior to any project plan approvals in follow-up meetings designed to discuss specific monitoring effects.

An effective reporting system must be established prior to any monitoring efforts. All parties involved must have a clear understanding of the mitigation measures as adopted, and these mitigations must be distributed to the participants of the monitoring effort. Those that would have a complete list of all the mitigation measures adopted by the City of Chula Vista would include the City of Chula Vista, the project applicant, the MM, and the construction crew supervisor. The MM would distribute to each EM and ES a specific list of mitigation measures that pertain to his or her monitoring tasks and the appropriate time frame that these mitigations are anticipated to be implemented.

In addition to the list of mitigation measures, the monitors will have mitigation monitoring report (MMR) forms, with each mitigation measure written out on the top of the form. Below the stated mitigation measure, the form will have a series of questions addressing the effectiveness of the mitigation measure. The monitors shall complete the MMR and file it with the MM following the monitoring activity. The MM will then include the conclusions of the MMR into an interim and final comprehensive construction report to be submitted to the City of Chula Vista. This report will describe the major accomplishments of the monitoring program, summarize problems encountered in achieving the goals of the program, evaluate solutions developed to overcome problems, and provide a list of recommendations for future monitoring programs. In addition, and if appropriate, each EM or ES will be required to fill out and submit a log report to the MM. The log report will be used to record and account for the monitoring activities of the monitor. Weekly and/or monthly status report, as determined appropriate, will be generated from the logs and compliance reports and will include supplemental material (i.e., memoranda, telephone logs, and letters). This type of feedback is essential for the City of Chula Vista to confirm the implementation and effectiveness of the mitigation measures imposed on the project.

### 10.3 ACTIONS IN CASE OF NONCOMPLIANCE

There are generally three separate categories of noncompliance associated with the adopted conditions of approval:

- Noncompliance requiring an immediate halt to a specific task or piece of equipment;
- Infraction that warrants an immediate corrective action but does not result in work or task delay; and
- Infraction that does not warrant immediate corrective action and results in no work or task delay.

In each case, the MM would notify the applicant's contractor and the City of Chula Vista of the noncompliance, and an MMR would be filed with the MM on a daily basis.

There are a number of options the City of Chula Vista may use to enforce this program should noncompliance continue. Some methods commonly used by other lead agencies include "stop work" orders, fines and penalties (civil), restitution, permit revocations, citations, and injunctions. It is essential that all parties involved in the program understand the authority and responsibility of the on-site monitors. Decisions regarding actions in case of noncompliance are the responsibility of the City of Chula Vista.

### 10.4 SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES

The following table summarizes the potentially significant project impacts associated with the Otay Valley Quarry Reclamation Plan Amendment project and lists the associated mitigation measures and the monitoring efforts necessary to ensure that the measures are properly implemented. All the mitigation measures identified in the EIR are required as conditions of project approval and are stated herein in language appropriate for such conditions. In addition, during various stages of project implementation, the designated monitors, the City of Chula Vista, and the applicant will further develop the mitigation measures.

# 10.0 MITIGATION MONITORING AND REPORTING PROGRAM

**Table 10-1. Mitigation Monitoring and Reporting Program**

Mitigation Measure No.	Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party	Completed		Comments
			Pre Const.	During Const.	Post Const.		Initials	Date	
BIOLOGICAL RESOURCES									
BIO-1	Appropriate noise attenuation features will be constructed adjacent to the quarry to minimize noise impacts. Excessively noisy uses or activities adjacent to breeding areas, including temporary grading activities, must incorporate noise reduction measures or be curtailed during the breeding season of sensitive bird species. Construction activity adjacent to the Preserve shall maintain noise levels that do not exceed 60 dB(A) Leq, or ambient noise levels if higher than 60 dB(A) Leq, during the breeding season for nesting sensitive birds. Prior to commencement of reclamation activities, a pre-construction survey shall be conducted to document the location of active nest sites. If active sites are observed, an acoustical analysis shall be provided to the City that demonstrates that adequate noise attenuation features shall be constructed to maintain noise levels below 60 dB(A) Leq at any active nest location. Outside the bird breeding season(s), no restrictions shall be placed on temporary construction noise.	Monitoring by City of Chula Vista Planning and Building Division		X		Applicant			
BIO-2 Drainage	<div>1. All reclamation activities and reclaimed areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials, and other elements that might degrade or harm the natural environment or ecosystem processes within the Preserve. This will be accomplished using a variety of methods including natural detention basins, grass swales, or mechanical trapping devices. These systems shall be maintained approximately once a year, or as often as needed, to ensure proper functioning. Maintenance should include dredging out sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.</div> <div>2. The project shall implement urban runoff and drainage plans as specified in Section 5.2.4 of the Otay Valley Reclamation Plan Amendment (December 23, 2010) which will create the least impact practicable for all areas adjacent to the Preserve.</div> <div>3. Pursuant to the San Diego Regional Water Quality Control</div>	Monitoring by the Chula Vista Engineering Division	X	X		Applicant			

## 10.0 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure No.	Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party	Completed		Comments
			Pre Const.	During Const.	Post Const.		Initials	Date	
	<p>Board Municipal Permit, and the City of Chula Vista Storm Water Management Standards Requirements Manual, which includes the SUSMP, all reclamation areas located directly adjacent to or discharging directly to an environmentally sensitive area (as defined in the Municipal Permit and the Local SUSMP) are required to implement site design, source control, and treatment control BMPs. For the proposed project and as presented in the Otay Valley Quarry Reclamation Plan Amendment (December 23, 2101) the BMPs shall, at a minimum, include:</p> <ul style="list-style-type: none"> <li>▪ Sedimentation basins;</li> <li>▪ Water truck usage and soil compaction via track walking;</li> <li>▪ Diversion of run-on and run-off through the use of temporary chevrons;</li> <li>▪ Silt fences, wattles, rock slope protection, or other sediment control devices;</li> <li>▪ Cleaning of accumulated sediment, debris, and potential contaminants from the storm water structural controls is conducted as needed before the start of the rainy seasons. This cleaning is done on an as-needed basis during the rainy season; and</li> <li>▪ Clearing of debris from drain inlets and drainage pipes.</li> </ul> <p>4. Written confirmation that this mitigation measure has been satisfied shall be provided to the City prior to commencement of reclamation activities. Conformation shall be provided to the satisfaction of the City Engineer in the form of an approved National Pollutant Discharge Elimination System Permit (NPDES) and Storm Water Pollution Prevention Plan (SWPPP).</p>								
BIO-3 Invasives	<p>The project shall comply with Section 5.2.3 of the Otay Valley Quarry Reclamation Plan. The project plant material described in the Reclamation Plan ensures that no invasive non-native plant species will be introduced into areas immediately adjacent to the Preserve. Consistent with the Reclamation Plan, all open space slopes immediately adjacent to the Preserve will be planted with native species that reflect the adjacent native habitat.</p> <p>Written confirmation that this mitigation measure has been</p>	Monitoring by City of Chula Vista Planning and Building Division	X	X		Applicant			

10.0 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure No.	Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party		Completed		Comments
			Pre Const.	During Const.	Post Const.			Initials	Date	
	satisfied shall be provided to the City prior to commencement of reclamation activities. Confirmation shall be provided to the satisfaction of the Development Services Director (or designee) in the form of landscape and irrigation plans prepared consistent with the list of approved plant species contained in the Otay Valley Quarry Reclamation Plan Amendment.									

# 10.0 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure No.	Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party	Completed		Comments
			Pre Const.	During Const.	Post Const.		Initials	Date	
CULTURAL RESOURCES									
CR-1	<p>Prior to implementation of the reclamation plan, the project applicant shall contract with a San-Diego-County-certified archaeologist to implement a grading-monitoring program to the satisfaction of the City of Chula Vista. Verification of the contract shall be presented, in letter from the Project Archaeologist to the City of Chula Vista. The program shall include, but not be limited to, the following:</p> <p>1. The consulting archaeologist shall contract with a Native American Observer to be involved with the grading-monitoring program.</p> <p>2. During the original cutting of previously undisturbed deposits, the archaeological monitor(s) (and Native American Observer) shall be on site, depending on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. Monitoring and the need for monitoring will be at the discretion of the qualified principal archaeologist. Monitoring locations may also include designated archeological high-probability areas. Intermittent monitoring may occur in areas of moderate archeological sensitivity at the discretion of the qualified/principal archaeologist. Multiple monitors may be required, due to the amount of grading being completed at any time, at the discretion of the principal archaeologist.</p> <p>3. In the event that previously unidentified potentially significant cultural resources are discovered, the archaeologist shall have the authority to divert or temporarily halt ground-disturbance operations in the area of discovery to allow evaluation of potentially significant cultural resources. The San Diego County Archaeologist must concur with the evaluation before construction activities will be allowed to resume in the affected area. For significant cultural resources, a Research Design and Data Recovery Program to mitigate impacts shall be prepared by the consulting archaeologist and approved by the San Diego County Archaeologist, then carried out using professional archaeological methods. If any human remains are discovered, the San Diego County Coroner shall be contacted. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant (MLD), as identified by the Native</p>	Monitoring by City of Chula Vista Planning and Building Division	X	X		Applicant			

## 10.0 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure No.	Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party		Completed		Comments
			Pre Const.	During Const.	Post Const.			Initials	Date	
	American Heritage Commission, shall be contacted in order to determine proper treatment and disposition of the remains.									
4.	Before construction activities are allowed to resume in the affected area, the artifacts shall be recovered and features recorded using professional archaeological methods. The archaeological monitor(s) and Native American Observer shall determine the amount of material to be recovered for an adequate artifact sample for analysis.									
5.	In the event that previously unidentified cultural resources are discovered, all cultural material collected during the grading-monitoring program shall be processed and curated according to current professional repository standards. The collections and associated records shall be transferred, including title, to an appropriate federally recognized curation facility within San Diego County, to be accompanied by payment of the fees necessary for permanent curation.									
6.	In the event that previously unidentified cultural resources are discovered, a report documenting the field and analysis results and interpreting the artifact and research data within the research context shall be completed and submitted to the satisfaction of the City of Chula Vista prior to Completion of the fourth stage of reclamation.									
7.	In the event that no cultural resources are discovered, a brief letter to that effect shall be sent to the City of Chula Vista by the consulting archaeologist, confirming that the grading-monitoring activities have been completed.									

## 10.0 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure No.	Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party	Completed		Comments
			Pre Const.	During Const.	Post Const.		Initials	Date	
PALEONTOLOGICAL RESOURCES									
PALEO-1	<p>1. The project will require implementation of a pre-construction mitigation program and/or construction mitigation program approved by the City. All mitigation programs shall be performed by a qualified professional paleontologist, defined here as an individual with a M.S. or Ph.D. in paleontology or geology who has proven experience in San Diego County paleontology and who is knowledgeable in professional paleontological procedures and techniques. Fieldwork may be conducted by a qualified paleontological monitor, defined here as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor shall always work under the direction of a qualified paleontologist.</p> <p>2. Pre-construction mitigation shall be implemented if the qualified professional paleontologist determines that there is a potential for well-preserved and significant fossil remains, discovered in the assessment phase, would be destroyed during initial brush clearing and equipment move-on. The individual tasks of this program include:</p> <p>a. Surface prospecting for exposed fossil remains, generally involving inspection of existing bedrock outcrops but possibly also excavation of test trenches;</p> <p>b. Surface collection of discovered fossil remains, typically involving simple excavation of the exposed specimen but possibly also plaster jacketing of large and/or fragile specimens or more elaborate quarry excavations of richly fossiliferous deposits;</p> <p>c. Recovery of stratigraphic and geologic data to provide a context for the recovered fossil remains, typically including description of lithologies of fossil-bearing strata, measurement and description of the overall stratigraphic section, and photographic documentation of the geologic setting;</p> <p>d. Laboratory preparation (cleaning and repair) of collected fossil remains, generally involving</p>	Monitoring by the Chula Vista Engineering Division		X	Applicant				



## 10.0 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure No.	Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party		Completed		Comments
			Pre Const.	During Const.	Post Const.			Initials	Date	
	<p>removal of enclosing rock material, stabilization of fragile specimens (using glues and other hardeners), and repair of broken specimens;</p> <p>e. Cataloging and identification of prepared fossil remains, typically involving scientific identification of specimens, inventory of specimens, assignment of catalog numbers, and entry of data into an inventory database;</p> <p>f. Transferal, for storage, of cataloged fossil remains to an accredited institution (museum or university) that maintains paleontological collections (including the fossil specimens, copies of all field notes, maps, stratigraphic sections, and photographs); and</p> <p>g. Preparation of a final report summarizing the field and laboratory methods used, the stratigraphic units inspected, the types of fossils recovered, and the significance of the curated collection.</p> <p>3. Construction mitigation shall be implemented as part of reclamation activities, at the discretion of the qualified professional paleontologist and in accordance with the approved mitigation program. The scope and pace of reclamation will generally dictate the scope and pace of mitigation. The individual tasks of a construction mitigation program typically include:</p> <p>a. Monitoring of any grading to discover unearthed fossil remains, generally involving inspection of ongoing exposures;</p> <p>b. Salvage of unearthed fossil remains, typically involving simple excavation of the exposed specimen but possibly also plaster jacketing of large and/or fragile specimens, or more elaborate quarry excavations of richly fossiliferous deposits;</p> <p>c. Recovery of stratigraphic and geologic data to provide a context for the recovered fossil remains, typically including description of lithologies of fossil-bearing strata, measurement and description of the overall stratigraphic section, and photographic documentation of the geologic setting;</p> <p>d. Laboratory preparation (cleaning and repair) of collected fossil remains, generally involving removal of enclosing rock material, stabilization of</p>									

## 10.0 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure No.	Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party		Completed		Comments
			Pre Const.	During Const.	Post Const.			Initials	Date	
	<p>fragile specimens (using glues and other hardeners), and repair of broken specimens;</p> <p>e. Cataloging and identification of prepared fossil remains, typically involving scientific identification of specimens, inventory of specimens, assignment of catalog numbers, and entry of data into an inventory database;</p> <p>f. Transferal, for storage, of cataloged fossil remains to an accredited institution (museum or university) that maintains paleontological collections, including the fossil specimens, copies of all field notes, maps, stratigraphic sections and photographs; and</p> <p>g. Preparation of a final report summarizing the field and laboratory methods used, the stratigraphic units inspected, the types of fossils recovered, and the significance of the curated collection.</p>									

## 10.0 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure No.	Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party	Completed		Comments
			Pre Const.	During Const.	Post Const.		Initials	Date	
HYDROLOGY/DRAINAGE/WATER QUALITY									
HYDRO-1	<p>BMPs shall be incorporated into the final plan for reclamation to be reviewed and approved by the City of Chula Vista and shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"><li>All construction vehicles shall be adequately maintained and equipped to minimize/eliminate fuel spillage. All equipment maintenance work shall occur on-site or within the designated construction staging area.</li><li>Any reclamation materials that need to be temporarily stockpiled or equipment/supplies that need to be stored on-site shall be kept within the construction staging areas and shall be covered when not in use.</li></ul>	Monitoring by the City of Chula Vista Engineering Division	X			Applicant			

## 10.0 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure No.	Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party	Completed		Comments
			Pre Const.	During Const.	Post Const.		Initials	Date	
GEOLOGY AND SOILS									
GEO-1	Ensure that the uppermost 50 feet of slopes will be cut or filled to a slope angle of 1:1 (horizontal to vertical) to mitigate shallow failures in weathered rock.	Monitoring by the City of Chula Vista Engineering Division		X		Applicant			

## 10.0 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure No.	Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party	Completed		Comments
			Pre Const.	During Const.	Post Const.		Initials	Date	
HAZARDS/RISK OF UPSET									
HAZ-1	All equipment refueling and maintenance shall be restricted to designated staging areas located away from drainages to avoid inadvertent releases from heavy equipment vehicles or supplies from entering surface water bodies. Additionally, heavy equipment and vehicles shall be inspected for leaks on a daily basis.	Monitoring by the City of Chula Vista Engineering Division		X		Applicant			
HAZ-2	Retention basins shall be installed in appropriate locations on the project site to prevent sediment-laden runoff, particularly in areas of exposed soils located within 10 feet of a drainage feature. Other sedimentation control features may include filter berms, straw base barriers, filter inlets, and vegetative swales.	Monitoring by the City of Chula Vista Engineering Division	X	X		Applicant			
HAZ-3	All reclamation staging areas shall include surface runoff reduction measures to contain hazardous materials such as oil, grease, or fuel products from being diverted off site or toward receiving waters. Should heavy equipment be stored overnight, particularly near drainage areas, drip plans shall be installed beneath machinery engine blocks and hydraulic systems.	Monitoring by the City of Chula Vista Engineering Division		X		Applicant			
HAZ-4	Spill Prevention Control and Countermeasure Plan shall be prepared and implemented should unanticipated releases of hazardous materials occur. The plan shall identify all hazardous materials (e.g., fuels, solvents) that would be present on any portion of the construction area and project site. Contingency analysis and planning shall be presented to identify potential spill or accident situations, how to minimize their occurrence, and how to respond should they occur. The plan shall also identify spill response materials (e.g., absorbent pads, shovels) to be kept at the construction site and their locations. All construction personnel shall receive training regarding the appropriate work practices necessary to effectively comply with the applicable environmental laws and regulations, including without limitation, hazardous materials spill prevention and response measures.	Monitoring by the City of Chula Vista Engineering Division		X		Applicant			

# 10.0 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure No.	Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party		Completed		Comments
			Pre Const.	During Const.	Post Const.			Initials	Date	
HAZ-5	As the water body fills with water, monitoring and control for vectors shall occur at intervals of every six months, or as described by the local vector control agency. Monitoring activities may cease upon 50 percent fill completion of the water body.	Monitoring by the City of Chula Vista Engineering Division		X		Applicant				

# 11.0 REFERENCES, PERSONS AND AGENCIES CONSULTED, EIR PREPARATION

## 11.1 REFERENCES

The following references were used in the preparation of this Environmental Impact Report and are available for review by the public at the offices of the City of Chula Vista, Planning and Building Department at 276 Fourth Avenue in Chula Vista, California 91910 during normal business hours.

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## 11.2 PERSONS AND AGENCIES CONTACTED

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